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of the Interior

National Park
Service

Supplement to the Soil Survey of Glacier Bay National Park and Preserve—Gustavus Area, Alaska

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Cover Photo

Muir Inlet, Glacier Bay National Park, Alaska (July 2013). Photo by Nathan Parry (NRCS soil scientist).

Contents

Preface xi
Introduction 1
General Nature of the Survey Area 1
How This Survey Was Made 2
Detailed Soil Map Units 5
20AF1—Muirpoint-Puffin complex, 5 to 20 percent slopes 6
20AF2—Entisols, alluvial fans, 0 to 35 percent slopes 9
20CL1—Strawberry-Fingerock complex, 0 to 5 percent slopes 10
20CP1—Oberlin-Perouse, frequently ponded-Perouse complex, 0 to 2 percent slopes 13
20CP2—Beaches-Monashka-Murkbay complex, 0 to 3 percent slopes 16
20CPF—Icy-Excursion complex, 0 to 1 percent slopes 18
20ED1—Gustavus-Bartlettcove complex, 5 to 20 percent slopes 20
20ED2—Beardslee-Monashka complex, 0 to 15 percent slopes 23
20FP1—Drybay-Tidalwave complex, 0 to 8 percent slopes 25
20FP2—Bertha-Puffin complex, 0 to 15 percent slopes 28
20FP3—Tidalwave-Ashmun, frequently ponded-Drybay complex, 0 to 10 percent slopes 30
20FPL—Cryaquepts-Typic Cryaquents-Water complex, estuaries, 0 to 5 percent slopes 33
20FPM—Typic Cryaquents, flood plains, 0 to 5 percent slopes 35
20FPY—Oxyaquic Cryorthents-Typic Cryaquents association, flood plains, 0 to 5 percent slopes 37
20FPZ—Typic Cryorthents-Typic Cryofluvents association, flood plains, 0 to 5 percent slopes 39
20GP1—Gustavus-Ibach-Scidmore complex, 0 to 30 percent slopes 41
20HI1—Foad-Boussole complex, 25 to 65 percent slopes 44
20HI2—Kashoto-Foad-Kutskloh complex, 2 to 55 percent slopes 46
20HI3—Polkapenn-Dagelet-Nunatak complex, 20 to 65 percent slopes 50
20HI5—Kaknau-Tricklake complex, 20 to 65 percent slopes 53
20HIB—Drybay-Kaknau-Vivid complex, 5 to 35 percent slopes 56
20HID—Grandplateau-Crillon complex, 10 to 60 percent slopes 59
20HIE—Kashoto-Kutskloh-Wachusett complex, 5 to 55 percent slopes 61
20HIF—Kashoto-Wachusett complex, 2 to 25 percent slopes 64
20HIN—Polkapenn-Nunatak complex, 20 to 60 percent slopes 67
20HIS—Lithic Cryorthents and Typic Humicryepts, 76 to 140 percent slopes 69
20IS1—Cenotaph-Water, saline-Beaches complex, 0 to 5 percent slopes 71
20LF1—Abyss-Astrolable complex, 0 to 5 percent slopes 73
20MD1—Gustavus-Perouse complex, 0 to 15 percent slopes 75
20MF1—Geikie-Gustavus-Scidmore complex, 0 to 8 percent slopes 78
20MF2—Gustavus-Geikie complex, 0 to 10 percent slopes 81
20MT1—Bearisland-Kadachan-Rubble land complex, 15 to 45 percent slopes 83
20MT2—Escures-Polkapenn-Nunatak complex, 45 to 95 percent slopes 86
20MT3—Polkapenn-Bearisland-Enigma complex, 40 to 100 percent slopes 89

20MT4—Seclusion-Rock outcrop complex, 45 to 100 percent slopes....................93
20MT5—Rock outcrop-Seclusion-Skarn complex, 30 to 90 percent slopes............95
20MT6—Bergbay-Boussole-Toyatte complex, 25 to 90 percent slopes 97
20MT7—Foad-Abdallah-Justicecreek complex, 35 to 85 percent slopes..............101
20MTC—Skarn-Polkapenn-Kadachan complex, 25 to 90 percent slopes.............104
20MTE—Wachusett-Maquinna-Boussole complex, 10 to 60 percent slopes 107
20MTF—Wachusett-Maquinna-Enigma complex, 25 to 90 percent slopes 111
20OC1—Scidmore-Perouse, frequently ponded complex, 0 to 3 percent slopes 114
20OD1—Gustavus-Lamplugh complex, 0 to 30 percent slopes 116
20ODF—Glacierbay-Geikie complex, 0 to 15 percent slopes...............................119
20OP1—Fossil-Tyeen-Vivid complex, 0 to 15 percent slopes 121
20OP4—Kashoto-Annoksek-Bulky complex, 0 to 10 percent slopes 125
20OP5—Fossil-Tyeen-Vivid complex, 15 to 45 percent slopes 128
20OP6—Bulky-Bertha-Icy complex, 0 to 10 percent slopes 131
20OPE—Tyeen-Shagcove-Puffin complex, 0 to 15 percent slopes.......................134
20OV1—Perouse, frequently ponded-Perouse complex, 0 to 5 percent slopes....137
20OW1—Perouse-Gustavus-Perouse, frequently ponded complex, 0 to 5 percent slopes 140
20OWF—Fairweather-Icy complex, 0 to 5 percent slopes....................................143
20PL1—Tyeen-Cenotaph-Fossil complex, 0 to 30 percent slopes 145
20PL2—Tyeen-Fossil-Fingers complex, 0 to 30 percent slopes...........................148
20PL3—Kashoto-Annoksek-Ancon complex, 0 to 25 percent slopes....................151
20PL6—Tidalwave-Drybay-Puffin complex, 0 to 10 percent slopes 154
20PLD—Typic Cryaquents-Typic Cryorthents association, flat lowlands, 0 to 5 percent slopes 157
20RW2—Riverwash-Oxyaquic Cryorthents complex, 0 to 5 percent slopes 159
20SC—Beaches-Typic Cryopsamments complex, 0 to 5 percent slopes..............160
20TE2—Tidalwave-Drybay complex, 0 to 5 percent slopes..................................162
20TF1—Water, saline-Astrolable-Murkbay complex, 0 to 5 percent slopes...........164
20TF3—Water, saline-Astrolable-Beartrack complex, 0 to 3 percent slopes.........167
20TH1—Ibach-Lamplugh-Bartlettcove complex, 2 to 35 percent slopes...............170
20UL1—Urban land 173
20UM1—Rock outcrop-Bearisland complex, 60 to 100 percent slopes.................174
20UM2—Rock outcrop-Bearisland complex, 10 to 60 percent slopes...................175
20VBA—Typic Cryofluvents-Aquic Dystrocryepts association, flood plains, 0 to 5 percent slopes 177
20WD1—Perouse-Scidmore-Perouse, frequently ponded complex, 0 to 5 percent slopes 179
22HIA—Rock outcrop and Lithic Cryorthents 182
22SM1—Woodlake-Flapjack complex, 5 to 40 percent slopes.............................183
BR—Rock outcrop 185
GL2—Glaciers..186

P—Pits 186
RW—Riverwash 186
SW—Water, saline 188
W—Water 188
Ecological Site Descriptions 189
Ecological Site Tables 191
Ecological Sites of Glacier Bay National Park 191
F220XY350AK—Subalpine Woodlands Gravelly Dry Slopes 191
F220XY427AK—Maritime Forest Gravelly Floodplain High 192
F220XY430AK—Maritime Forest Sandy Plain Alluvial Fan 193
F220XY432AK—Maritime Forest Gravelly Plain 194
F220XY433AK—Maritime Forest Loamy Slopes 195
F220XY434AK—Maritime Woodland Peat Plain Depression 197
F220XY435AK—Maritime Forest Loamy Plain Wet 198
F220XY439AK—Maritime Woodland Peat Slopes 199
F220XY440AK—Maritime Forest Loamy Plains 200
F220XY441AK—Maritime Forest Gravelly Slopes 201
F220XY442AK—Maritime Forest Loamy Slopes Steep 202
F220XY447AK—Maritime Forest Loamy Organic Slopes 203
F220XY455AK—Maritime Forest Sandy Coastal Plain 204
F220XY460AK—Maritime Forest Gravelly Alluvial Plain 205
F220XY464AK—Maritime Forest Loamy Slopes Cold 207
F220XY466AK—Maritime Forest Sandy Plains Eolian 208
F220XY468AK—Maritime Forest Loamy Slopes Warm 209
R220XY329AK—Estuarine Herbaceous Gravelly Coastal Plain 210
R220XY422AK—Estuarine Herbaceous Sandy Coastal Plain 211
R220XY423AK—Estuarine Herbaceous Sandy Depression 212
R220XY424AK—Estuarine Herbaceous Sandy Beach Plain 213
R220XY425AK—Maritime Shrub Gravelly Drainageway 214
R220XY426AK—Maritime Shrub Gravelly Floodplain Low 215
R220XY436AK—Maritime Graminoid Loamy Plain Depression 217
R220XY443AK—Maritime Scrub Loamy Slopes Steep 217
R220XY444AK—Maritime Scrub Gravelly Drainageways Steep 218
R220XY446AK—Maritime Scrub Loamy Escarpments 220
R220XY461AK—Maritime Shrub Sandy Drainageways 221
R220XY465AK—Maritime Scrub Loamy Slopes 222
R222XY356AK—Alpine Dwarf Scrub Dry Gravelly Slopes 223
R222XY360AK—Alpine Herbaceous Wet Organic Depressions 224
Use and Management of the Soils 227
Interpretive Ratings 227
Land Capability Classification 228
Prime Farmland 229
Hydric Soils 229

Land Management Tables 230
Recreation 232
Dwellings 233
Roads and Streets 234
Sewage 235
Gravel and Sand 236
Reclamation Material 237
Soil Properties 239
Engineering Properties 239
Physical Soil Properties 240
Erosion Properties 241
Total Soil Carbon 242
Chemical Soil Properties 243
Water Features 243
Soil Features 245
Formation of the Soils 247
Soil-Forming Factors 247
Soil Processes and Indicators 257
References 261
Glossary 265
Tables 281
Table 1.—Legend 282
Table 2.—Acres, Hectares, and Proportionate Extent of the Map Units 294
Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID 296
Table 4.—Ecological Site-Soil Correlation 314
Table 5.—Land Capability Classification 326
Table 6.—Hydric Soils 334
Table 7.—Land Management, Part I (Planting) 339
Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads) 353
Table 7.—Land Management, Part III (Site Preparation) 366
Table 7.—Land Management, Part IV (Site Restoration) 378
Table 8.—Recreational Development, Part I 392
Table 8.—Recreational Development, Part II 409
Table 9.—Dwellings and Small Commercial Buildings 424
Table 10.—Roads and Streets, Shallow Excavations, and Landscaping 440
Table 11.—Sewage Disposal 462
Table 12.—Source of Gravel and Sand 483
Table 13.—Source of Reclamation Material, Roadfill, and Topsoil 497
Table 14.—Engineering Properties 515
Table 15.—Physical Soil Properties 549
Table 16.—Erosion Properties 571

Table 17.—Total Soil Carbon....588
Table 18.—Chemical Soil Properties....596
Table 19.—Water Features....613
Table 20.—Soil Features....642
Table 21.—Taxonomic Classification of the Soils....657

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Preface

This soil survey was developed in conjunction with the National Park Service Inventory and Monitoring Program and is intended to serve as the official source document for soils occurring within Glacier Bay National Park and Preserve—Gustavus Area, Alaska.

This soil survey contains information that affects current and future land use planning in the park. It contains predictions of soil behavior for selected land uses. The survey highlights soil limitations, actions needed to overcome the limitations, and the impact of selected land uses on the environment. It is designed to meet the needs of the National Park Service and its partners to better understand the properties of the soils in the park and the effects of these soil properties on various natural ecological characteristics. This knowledge can help the National Park Service and its partners to understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each map unit is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Alaska park office.

Hard-copy detailed soil maps were not created for this survey. The maps and spatial data are available online at http://websoilsurvey.nrcs.usda.gov.

Supplement to the

Soil Survey of Glacier Bay National Park and Preserve—Gustavus Area, Alaska

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General Nature of the Survey Area

This section provides information on the physiography, climate, geology, and biological resources in the survey area.

Physiography

Glacier Bay National Park and Preserve covers 3.3 million acres. It is characterized by snowcapped mountain ranges, coastal beaches with protected coves, deep fjords, tidewater glaciers, coastal and estuarine waters, and freshwater lakes. The terrain includes steep, rugged, high-relief mountains, massive glaciers and ice fields, and moderate- to low-relief and deeply incised mountains. Glaciers and ice fields make up about half of the park area. Unglaciated areas are deeply incised with narrow to broad valleys. Flood plains and stream terraces on valley floors rapidly transition to steep alluvial fans and mountain footslopes. Elevation ranges from sea level, at the base of tidewater glaciers and ice fields, to 15,300 feet (5,489 meters), at the summit of Mount Fairweather.

Climate

Cloudy conditions and moderate to cold temperatures characterize the climate. Most of the survey area in lower-elevation forested and subalpine zones has a temperate maritime climate. At higher elevations in the true alpine zone, the park has a transitional continental/maritime climate. Precipitation is typically abundant throughout the year at all elevations. Average annual precipitation at the closest weather station (Gustavus) is 1,380 millimeters. Monthly precipitation varies between 59 and 220 millimeters, and the wettest months are September through January (Western Regional Climate Center (1971 - 2000)). Annual precipitation and potential evapotranspiration estimates for Gustavus represent an annual moisture surplus of 863 millimeters (Patric and Black, 1968). Orographic effects create rain shadows and areas of increased precipitation in addition to variable snow depth and persistence throughout the park. Maximum temperatures at sea level rarely exceed 24 degrees

C, while minimum temperatures rarely are below -23 degrees C. The mean annual temperature is about 5 degrees C.

Geology

Glacier Bay National Park and Preserve consists of four accreted terranes: Yakutat, Chugach, Alexander, and Wrangellia. The terranes moved hundreds of kilometers from the south along three major, northwest-trending, lateral faults: the Chatham Strait Fault, the Border Ranges Fault, and the Fairweather-Queen Charlotte Fault. Within the park, the bedrock ranges in age from Silurian volcanic rock, sandstone, and limestone to sedimentary rock as young as Quaternary, overlain by Quaternary unconsolidated deposits (moraines, outwash plains, beaches, and sand dunes). Many of the rocks on the west side of Glacier Bay and east of the Border Ranges Fault are plutonic rocks of various ages. West of the Border Ranges Fault and east of the Fairweather Fault, the bedrock consists largely of rocks of the Valdez Group, a Late Cretaceous unit of sandstone and shale. This unit is intruded by Eocene and Oligocene plutons and metamorphosed to greenschist facies, resulting in crystallization of metamorphic minerals and development of metamorphic foliation. West of the Fairweather Fault, rocks of the Yakutat Group, consisting of Jurassic and Cretaceous flysch and melange, are exposed and overlain by the Late Tertiary and Quaternary Yakataga Formation in the vicinity of Lituya Bay and along the coast of the Gulf of Alaska (Wilson and Karl, 2019). A large earthquake occurred on July 10, 1958, along the Fairweather Fault. It caused 30 million cubic meters of rock to plunge into Lituya Bay, generating a wave that rose 1,690 feet on the opposite wall of the inlet (Streveler et al., 1980).

Biological Resources

Glacier Bay National Park and Preserve can be broken into three different life zones: maritime, subalpine, and alpine. Within the maritime zone productive stands of western hemlock and Sitka spruce are the dominant vegetation on mountains at lower elevations. Black cottonwood and mixed forest types occur on flood plains. Peatlands and other sites too wet for forest growth support sedge-grass meadows. As elevation increases, mountain hemlock becomes the dominant tree in forested stands, marking the transition to subalpine vegetation. Low scrub, tall alder scrub, and bluejoint reedgrass meadows are common in the subalpine zone. Dwarf alpine scrub, herbaceous communities, and barren ground dominate the alpine landscape above about 2,500 to 3,000 feet (762 to 914 meters) in elevation.

Major mammal species in the survey area include brown bear, black bear, Sitka black-tailed deer, moose, wolf, and mountain goat. The rocky shoreline of the park is also critical habitat for harbor seals and Steller sea lions. Many species of migratory waterfowl and shorebirds pass through the park. Peregrine falcons and bald eagles nest in the area. Area streams and rivers support healthy populations of wild salmon and freshwater fish, and the coastal margins provide habitat for a wide variety of marine life.

How This Survey Was Made

This survey was made in conjunction with the National Park Service’s Soil Inventory and Monitoring Program to provide information about the soils and miscellaneous areas within Glacier Bay National Park and Preserve (GLBA).

The GLBA soil survey was initiated in 2012. Fieldwork for the project commenced in 2013. Fieldwork continued in 2015 and concentrated on looking at areas of concern pointed out by the GLBA park staff. This work involved establishing new series for broadly defined components.

During the soil survey, ecological site and soil component relationships were observed. Soil-site correlation concepts were established to help in designing the map units. Specifically, a soil and ecological site key was developed and used during fieldwork. It was used to convey procedural steps for field association concepts between soils and ecological sites by life zone, landform, soil component, and proposed ecological site name. Soil and plant specialists tested the concepts during mapping and collected field documentation at numerous points across the landscape.

The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units).

Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil Taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they delineated the boundaries of these bodies on digital imagery and identified each as a specific map unit. The map unit digitizing was conducted using 15m TerraColor and 2.5m SPOT imagery. Digital elevation models were created from 5m Interferometric Synthetic Aperture Radar (IFSAR), then resampled to 10m. The map unit elevation and slope data was then sampled and extracted using RStudio, generating statistics organized by map unit in ArcMAP.

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the park. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the maps provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. The soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. For example, the Gustavus component of Gustavus-Lamplugh complex, 0 to 30 percent slopes, is a phase of the Gustavus series. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. Soils that have limited extent may be named for taxa higher than a soil series. For example, Typic Cryaquents in the survey area are classified only to the family level. The map unit descriptions include a full pedon description for each major soil component.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups. A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Muirpoint-Puffin complex, 5 to 20 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Typic Cryaquents-Typic Cryorthents association, flat lowlands, 0 to 5 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Lithic Cryorthents and Typic Humicryepts, 76 to 140 percent slopes, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Riverwash is an example.

Table 1 lists each map unit in the park, its major and minor components, and the percentage of each component in the unit. Table 2 gives the acreage, number of hectares, and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. Table 21 shows the taxonomic classification for each soil in the survey area, and table 22 gives the soil classification key. Locator maps for each map unit within the park are in the Appendix. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

20AF1—Muirpoint-Puffin complex, 5 to 20 percent slopes

Map Unit Setting

Landscape: Glaciated mountain valleys (figs. 1 and 2)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 60 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 0 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Muirpoint and similar soils: 65 percent
Puffin and similar soils: 15 percent
Dissimilar minor components: 20 percent

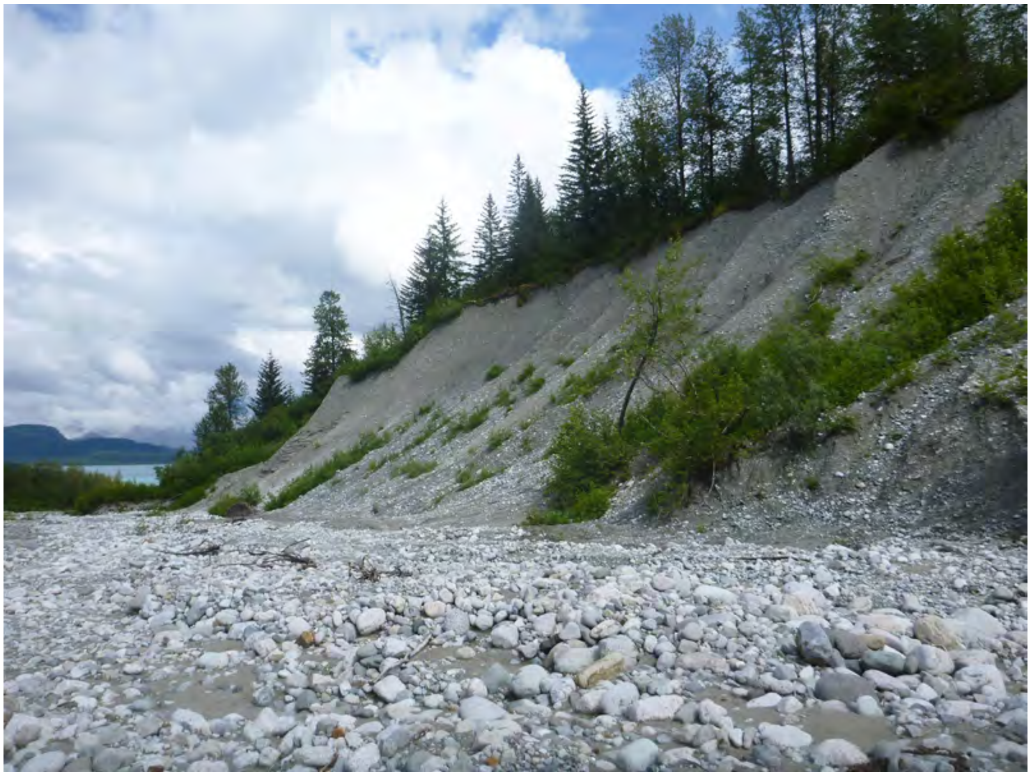

Figure 1.—Canyon mouth at head of alluvial fan in map unit 20AF1.

Characteristics of the Muirpoint Soil

Setting

Landform: Valley trains
Landform position (three-dimensional): Mountainbase
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 5 to 20 percent
Parent material: Glaciofluvial deposits

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.3 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Sandy Plain Alluvial Fan (F220XY430AK)
Hydric soil status: No

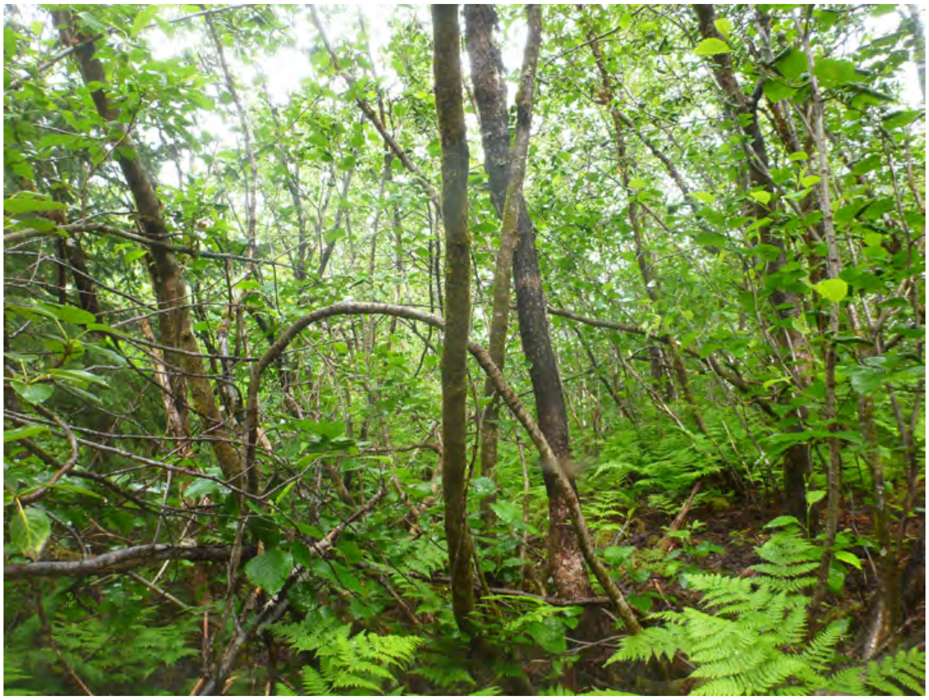

Figure 2.—Typical vegetation in map unit 20AF1.

Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile

Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 11 centimeters; gravelly coarse sandy loam
AC—11 to 30 centimeters; very gravelly loamy coarse sand
C—30 to 150 centimeters; extremely gravelly coarse sand

Characteristics of the Puffin Soil

Setting

Landform: Low flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 5 to 15 percent
Parent material: Alluvium

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Somewhat poorly drained
Flooding frequency: Frequent (see table 19)
Ponding frequency: None

Seasonal water table (depth, kind): About 65 to 75 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 2.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Oxyaquic Cryorthents

Typical Profile
C1—0 to 70 centimeters; extremely gravelly loamy coarse sand
C2—70 to 150 centimeters; extremely gravelly coarse sand

Minor Components

Bertha soils
Percent of map unit: 10 percent
Slope: 0 to 8 percent
Landform: High flood plains
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No

Riverwash
Percent of map unit: 10 percent
Slope: 1 to 3 percent
Hydric soil status: Yes

20AF2—Entisols, alluvial fans, 0 to 35 percent slopes

Map Unit Setting

Landscape: Coastal plains
Major land resource area (MLRA): 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 300 meters
Mean annual precipitation: 3,556 to 5,588 millimeters
Mean annual air temperature: 2 to 5 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Entisols and similar soils: 90 percent
Dissimilar minor components: 10 percent

Characteristics of the Entisols

Setting
Landform: Alluvial fans
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 35 percent
Parent material: Alluvium over outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)

Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 152 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 3.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Shrub Gravelly Drainageway (R220XY425AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Entisols

Typical Profile
Oi—0 to 3 centimeters; slightly decomposed plant material
A—3 to 6 centimeters; loamy very fine sand
C—6 to 26 centimeters; fine sand
2C—26 to 152 centimeters; very gravelly coarse sand

Minor Components

Cryods
Percent of map unit: 10 percent
Slope: 0 to 35 percent
Landform: Alluvial fans
Ecological site: Maritime Forest Sandy Plain Alluvial Fan (F220XY430AK)
Hydric soil status: No

20CL1—Strawberry-Fingerock complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Shore complexes (fig. 3)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 20 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Strawberry and similar soils: 60 percent
Fingerock and similar soils: 20 percent
Dissimilar minor components: 20 percent

Characteristics of the Strawberry Soil

Setting
Landform: Beach plains

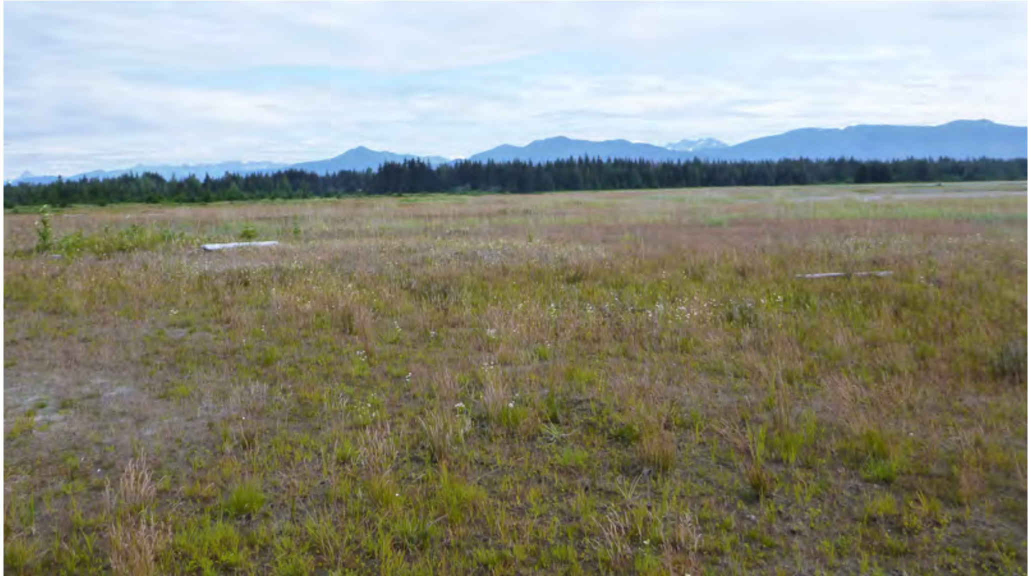

Figure 3.—Beach plain talf in map unit 20CL1.

Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Marine deposits

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.6 LEP)
Salinity maximum based on representative value: Nonsaline (about 1.7 mmhos/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Somewhat poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 44 to 54 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 15.5 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 3e
Ecological site: Estuarine Herbaceous Sandy Beach Plain (R220XY424AK)
Hydric soil status: No
Hydrologic soil group: B/D
Soil classification: Coarse-loamy, mixed, superactive, calcareous Aquic Cryorthents

Typical Profile

Oe—0 to 3 centimeters; moderately decomposed plant material
C—3 to 49 centimeters; sandy loam
Cg—49 to 150 centimeters; fine sandy loam

Characteristics of the Fingerock Soil

Setting

Landform: Raised beaches
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 1 percent
Parent material: Beach sand

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Very slightly saline (about 3.3 mmhos/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 85 to 95 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 3.6 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Sandy Coastal Plain (R220XY422AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Mixed Oxyaquic Cryopsamments

Typical Profile

C1—0 to 18 centimeters; fine sand
C2—18 to 22 centimeters; sand
C3—22 to 130 centimeters; sand
Cg—130 to 150 centimeters; fine sand

Minor Components

Beartrack soils

Percent of map unit: 10 percent
Slope: 0 to 3 percent
Landform: Fluviomarine bottoms
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes

Murkbay soils

Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Barrier beaches
Ecological site: Estuarine Herbacous Sandy Coastal Plain (R220XY422AK)
Hydric soil status: No

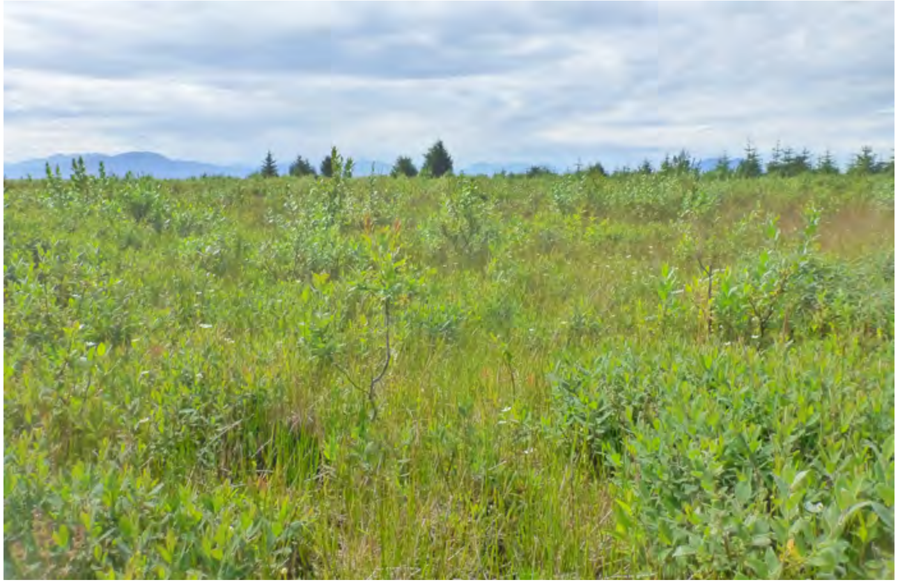

Figure 4.—Marine terrace tread in map unit 20CP1.

20CP1—Oberlin-Perouse, frequently ponded-Perouse complex, 0 to 2 percent slopes

Map Unit Setting

Note: This map unit occurs outside the park in the small community of Gustavus. A locator map is not provided in the Appendix.

Landscape: Shore complexes (fig. 4)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 40 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Oberlin and similar soils: 55 percent
Perouse, frequently ponded, and similar soils: 25 percent
Perouse and similar soils: 15 percent
Dissimilar minor components: 5 percent

Characteristics of the Oberlin Soil

Setting
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 2 percent
Parent material: Outwash over marine deposits

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters

Shrink-swell potential: Low (about 1.0 LEP)
Salinity maximum based on representative value: Very slightly saline (about 3.5 mmhos/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 2

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 11 to 22 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 6.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbaceous Sandy Depression (R220XY423AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Sandy, mixed Typic Cryaquepts

Typical Profile
A—0 to 3 centimeters; sandy loam
Bw—3 to 18 centimeters; fine sandy loam
C—18 to 35 centimeters; very fine sandy loam
2Cg1—35 to 58 centimeters; loamy sand
2Cg2—58 to 150 centimeters; coarse sand

Characteristics of the Perouse, Frequently Ponded, Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 2 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes

Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat
Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand
Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

Characteristics of the Perouse Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 2 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat
Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand
Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

Minor Components

Scidmore soils
Percent of map unit: 5 percent
Slope: 0 to 2 percent
Landform: Pitted outwash plains
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

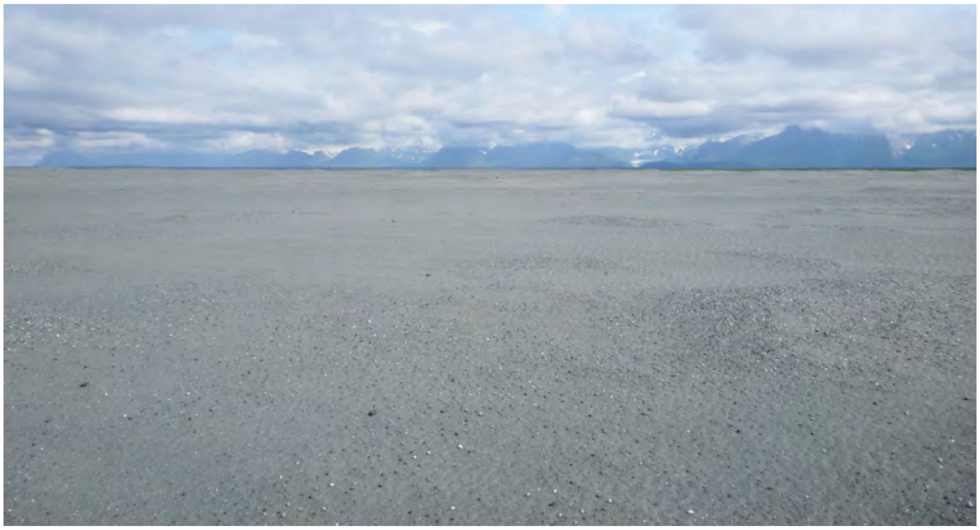

Figure 5.—Typical landscape in map unit 20CP2.

20CP2—Beaches-Monashka-Murkbay complex, 0 to 3 percent slopes

Map Unit Setting

Landscape: Shore complexes
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast (fig. 5)
Elevation: 0.0 to 15 meters
Mean annual precipitation: 2,180 to 6,360 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 64 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Beaches: 50 percent
Monashka and similar soils: 25 percent
Murkbay and similar soils: 25 percent

Description of Beaches

Beaches are sandy, gravelly, or cobbly shores that are washed and rewashed by waves. The areas may be partly covered with water during high tides or storms.

Characteristics of the Monashka Soil

Setting
Landform: Dune slacks on coastal plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Sandy eolian sands

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)

Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Estuarine Herbaceous Sandy Depression (R220XY423AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat
Oa—4 to 8 centimeters; muck
Cg1—8 to 19 centimeters; sand
Cg2—19 to 150 centimeters; sand

Characteristics of the Murkbay Soil

Setting
Landform: Barrier beaches
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Fluviomarine deposits

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline (about 1.8 mmhos/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 6.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Sandy Coastal Plain (R220XY422AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Mixed Typic Cryopsamments

Typical Profile
Oi—0 to 1 centimeter; slightly decomposed plant material
A—1 to 3 centimeters; loamy sand
C1—3 to 25 centimeters; sand
C2—25 to 80 centimeters; sand
C3—80 to 125 centimeters; fine sand
C4—125 to 150 centimeters; sand

20CPF—Icy-Excursion complex, 0 to 1 percent slopes

Map Unit Setting

Landscape: Shore complexes (fig. 6)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 20 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Icy and similar soils: 45 percent
Excursion and similar soils: 40 percent
Dissimilar minor components: 15 percent

Characteristics of the Icy Soil

Setting
Landform: Fluviomarine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects

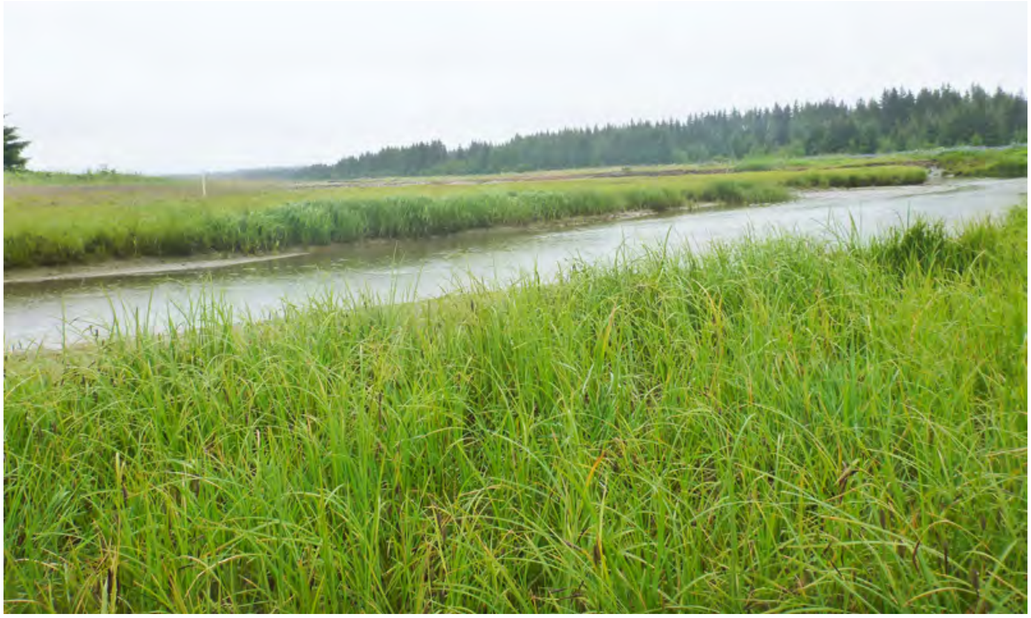

Figure 6.—A river dissecting a fluviomarine terrace tread in map unit 20CPF.

Slope range: 0 to 1 percent
Parent material: Alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Moderate (about 3.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): High (about 29.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Fine-silty, mixed, superactive, calcareous Typic Cryaquents

Typical Profile
Oe—0 to 20 centimeters; mucky peat
Cg1—20 to 89 centimeters; silt loam
Cg2—89 to 119 centimeters; silt loam
2Cg3—119 to 150 centimeters; loamy sand

Characteristics of the Excursion Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 1 percent
Parent material: Mossy organic material over outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 1.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): High (about 29.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Coarse-loamy, mixed, superactive, nonacid Typic Cryaquents

Typical Profile
Oi—0 to 14 centimeters; peat
Oe—14 to 26 centimeters; mucky peat
Cg1—26 to 70 centimeters; loam
Cg2—70 to 150 centimeters; very fine sandy loam

Minor Components

Strawberry soils
Percent of map unit: 10 percent
Slope: 0 to 3 percent
Landform: Beach plains
Ecological site: Estuarine Herbaceous Sandy Beach Plain (R220XY424AK)
Hydric soil status: No

Astrolable soils
Percent of map unit: 5 percent
Slope: 0 to 1 percent
Landform: Tidal marshes
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes

20ED1—Gustavus-Bartlettcove complex, 5 to 20 percent slopes

Map Unit Setting

Landscape: Outwash plains (figs. 7 and 8)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 2.0 to 50 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Gustavus and similar soils: 75 percent
Bartlettcove and similar soils: 20 percent
Dissimilar minor components: 5 percent

Characteristics of the Gustavus Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 5 to 20 percent
Parent material: Outwash

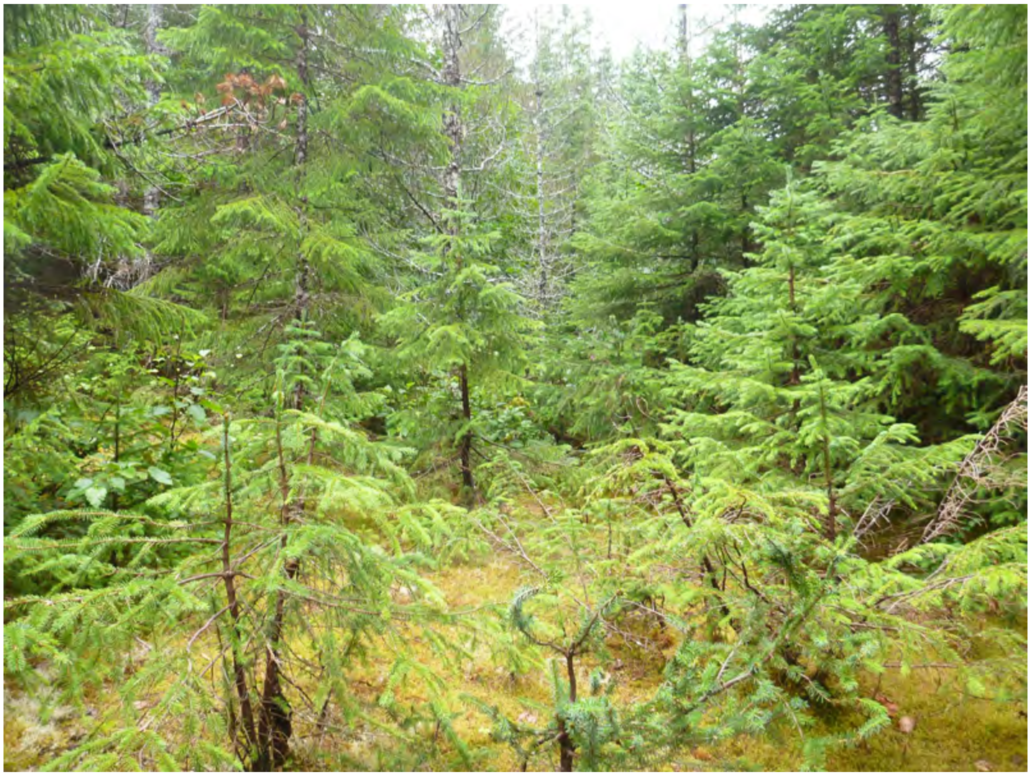

Figure 7.—Typical vegetation in map unit 20ED1.

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 11.4 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Haplocryepts

Typical Profile

Oe—0 to 12 centimeters; moderately decomposed plant material
Bw—12 to 33 centimeters; fine sandy loam
C1—33 to 68 centimeters; loamy sand
C2—68 to 140 centimeters; loamy sand
C3—140 to 150 centimeters; coarse sand

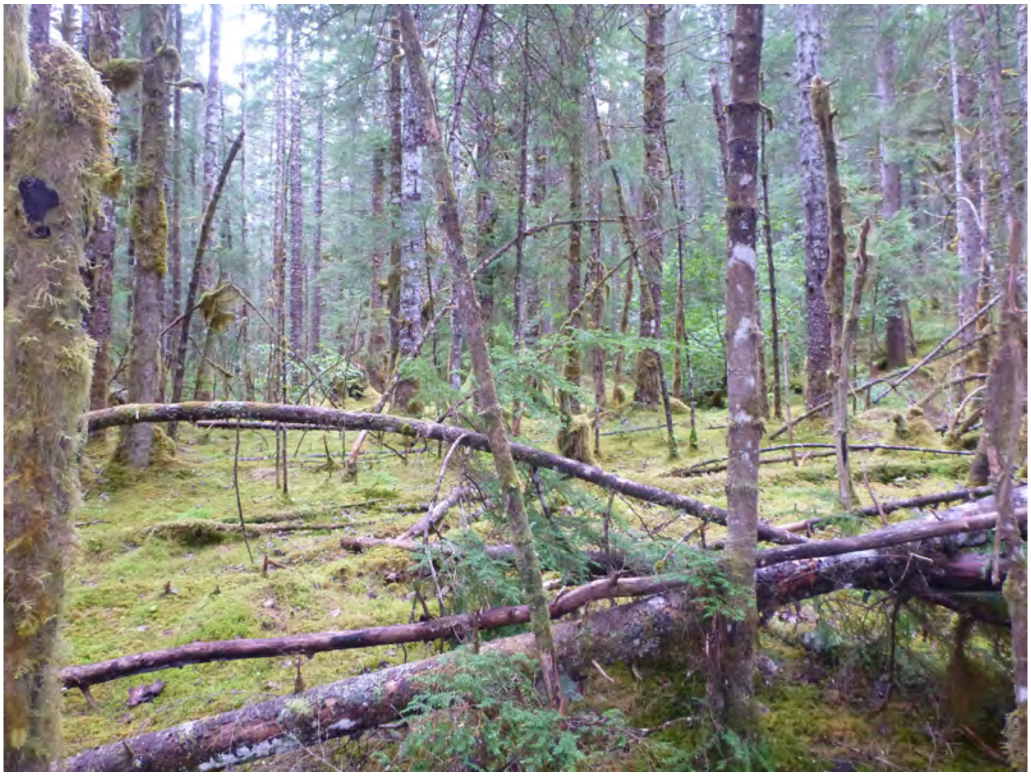

Figure 8.—Typical vegetation in map unit 20ED1.

Characteristics of the Bartlettcove Soil

Setting
Landform: Eolian hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 5 to 20 percent
Parent material: Eolian sands

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 11.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Entic Haplocryods

Typical Profile
Oe—0 to 12 centimeters; moderately decomposed plant material
E—12 to 14 centimeters; loamy fine sand
Bs—14 to 30 centimeters; loamy fine sand
BC—30 to 45 centimeters; loamy fine sand
C—45 to 150 centimeters; fine sand

Minor Components

Scidmore soils
Percent of map unit: 5 percent
Slope: 0 to 2 percent
Landform: Pitted outwash plains
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

20ED2—Beardslee-Monashka complex, 0 to 15 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 9)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 30 meters
Mean annual precipitation: 2,180 to 6,360 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Beardslee and similar soils: 60 percent
Monashka and similar soils: 40 percent

Characteristics of the Beardslee Soil

Setting
Landform: Eolian dunes
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 3 to 15 percent
Parent material: Eolian sands

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

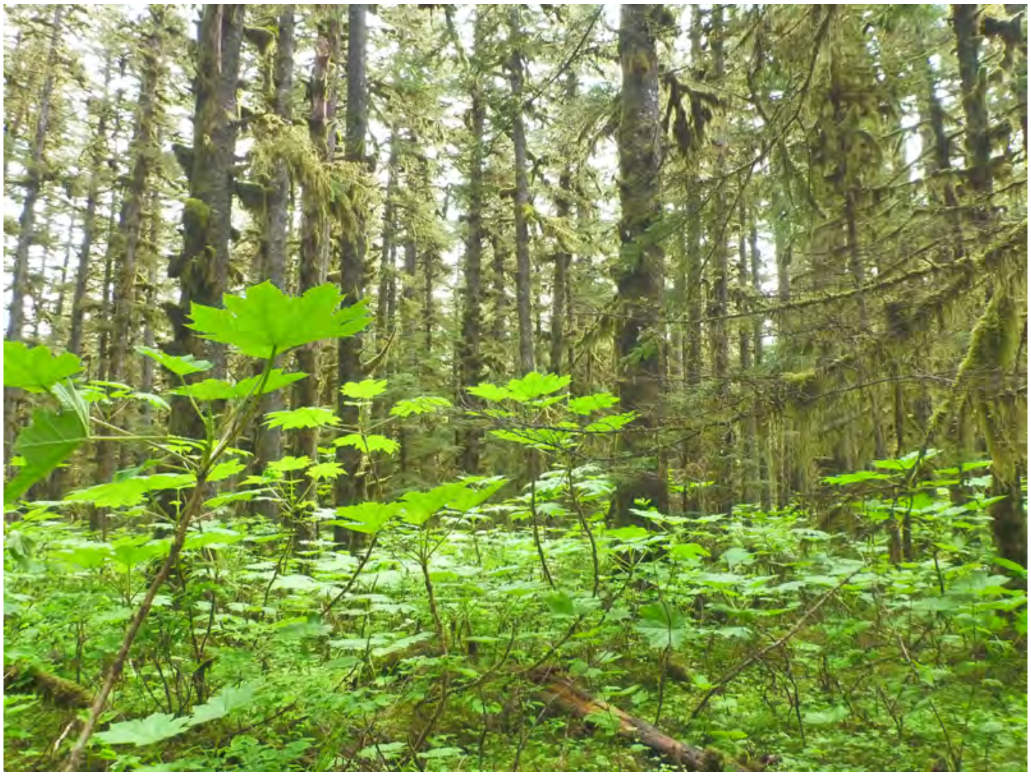

Figure 9.—Typical vegetation in map unit 20ED2.

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 9.2 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Sandy Plains Eolian (F220XY466AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Mixed Typic Cryopsamments

Typical Profile

Oe—0 to 13 centimeters; moderately decomposed plant material
A—13 to 21 centimeters; sandy loam
C1—21 to 48 centimeters; loamy sand
C2—48 to 150 centimeters; sand

Characteristics of the Monashka Soil

Setting

Landform: Dune slacks on coastal plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Aspect range: All aspects

Slope range: 0 to 3 percent
Parent material: Sandy eolian sands

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Estuarine Herbaceous Sandy Depression (R220XY423AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat
Oa—4 to 8 centimeters; muck
Cg1—8 to 19 centimeters; sand
Cg2—19 to 150 centimeters; sand

20FP1—Drybay-Tidalwave complex, 0 to 8 percent slopes

Map Unit Setting

Landscape: Alluvial plains (figs. 10 and 11)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 200 meters
Mean annual precipitation: 2,184 to 6,356 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Drybay and similar soils: 70 percent
Tidalwave and similar soils: 30 percent

Characteristics of the Drybay Soil

Setting
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects

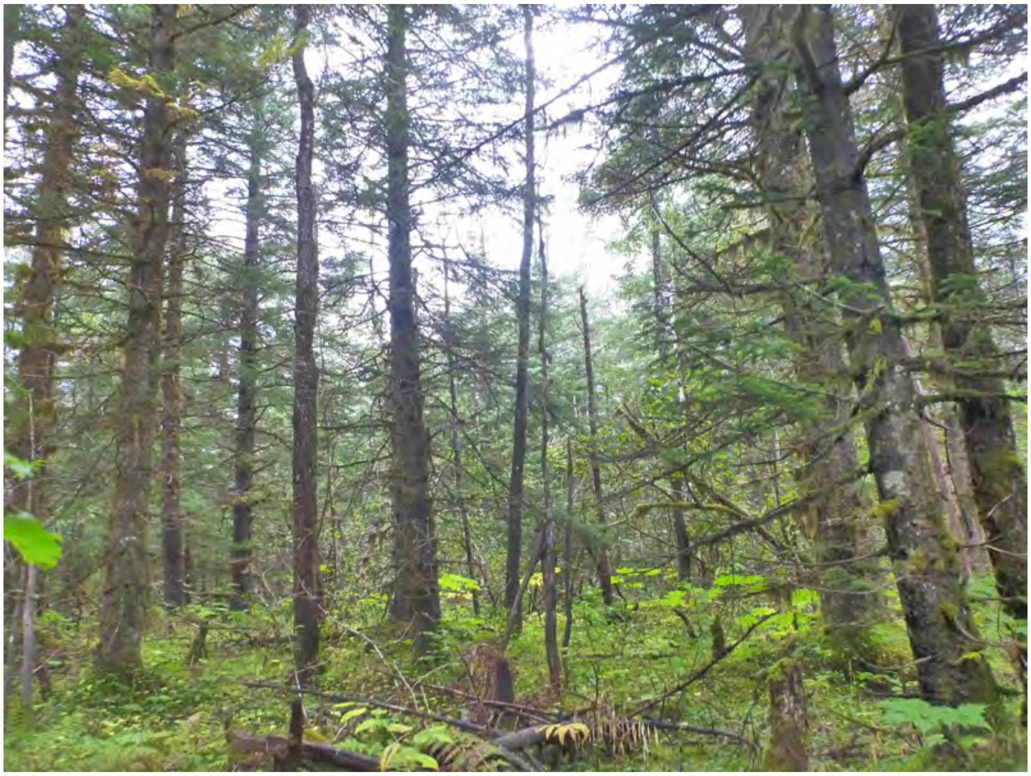

Figure 10.—Typical vegetation in map unit 20FP1.

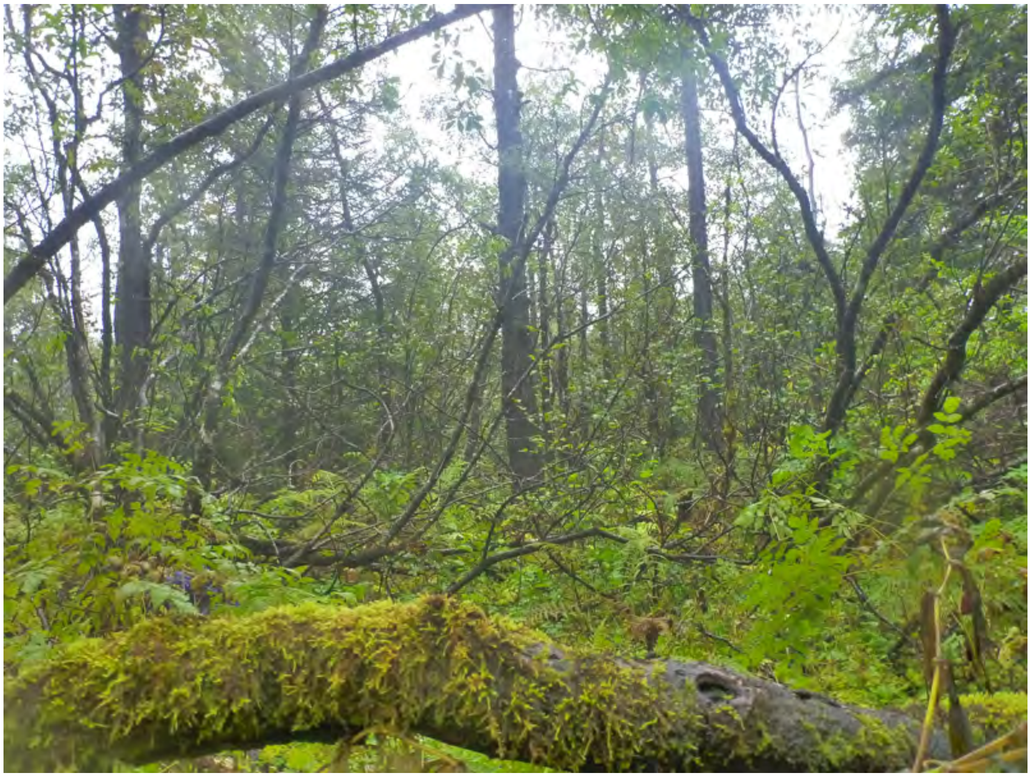

Figure 11.—Typical vegetation in map unit 20FP1.

Slope range: 0 to 8 percent
Parent material: Silty eolian deposits over sandy and gravelly alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Alluvial Plain (F220XY460AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile
Oe—0 to 2 centimeters; moderately decomposed plant material
A—2 to 11 centimeters; silt loam
2C1—11 to 24 centimeters; very gravelly coarse sandy loam
2C2—24 to 60 centimeters; extremely gravelly coarse sand
2C3—60 to 150 centimeters; extremely gravelly coarse sand

Characteristics of the Tidalwave Soil

Setting
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Loess over alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 70 to 80 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 4s
Ecological site: Maritime Forest Gravelly Alluvial Plain (F220XY460AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Sandy, mixed Oxyaquic Cryorthents

Typical Profile
Oa—0 to 4 centimeters; highly decomposed plant material
A—4 to 16 centimeters; very fine sandy loam
Bw—16 to 24 centimeters; fine sandy loam
BC—24 to 49 centimeters; sandy loam
2C—49 to 150 centimeters; gravelly coarse sand

20FP2—Bertha-Puffin complex, 0 to 15 percent slopes

Map Unit Setting

Landscape: River valleys (fig. 12)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 50 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Bertha and similar soils: 55 percent
Puffin and similar soils: 30 percent
Dissimilar minor components: 15 percent

Characteristics of the Bertha Soil

Setting
Landform: High flood plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 15 percent
Parent material: Sandy alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

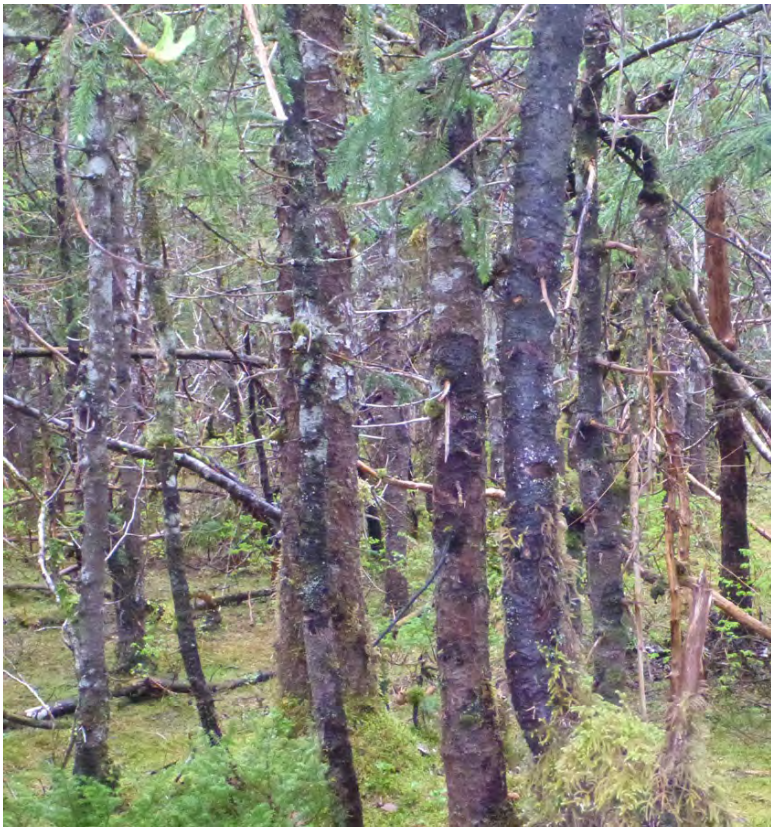

Figure 12.—Typical vegetation in map unit 20FP2.

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Cryofluvents

Typical Profile

Oi—0 to 3 centimeters; gravelly slightly decomposed plant material
C1—3 to 13 centimeters; coarse sand
C2—13 to 22 centimeters; extremely gravelly coarse sand
C3—22 to 150 centimeters; coarse sand

Characteristics of the Puffin Soil

Setting

Landform: Low flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)

Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Somewhat poorly drained
Flooding frequency: Frequent (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): About 65 to 75 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 2.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Oxyaquic Cryorthents

Typical Profile
C1—0 to 70 centimeters; extremely gravelly loamy coarse sand
C2—70 to 150 centimeters; extremely gravelly coarse sand

Minor Components

Riverwash
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Hydric soil status: Yes

Water
Percent of map unit: 5 percent

20FP3—Tidalwave-Ashmun, frequently ponded-Drybay complex, 0 to 10 percent slopes

Map Unit Setting

Landscape: Alluvial plains (fig. 13)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 200 meters
Mean annual precipitation: 2,184 to 6,356 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Tidalwave and similar soils: 60 percent
Ashmun, frequently ponded, and similar soils: 25 percent
Drybay and similar soils: 15 percent

Characteristics of the Tidalwave Soil

Setting
Landform: Terraces
Landform position (three-dimensional): Tread

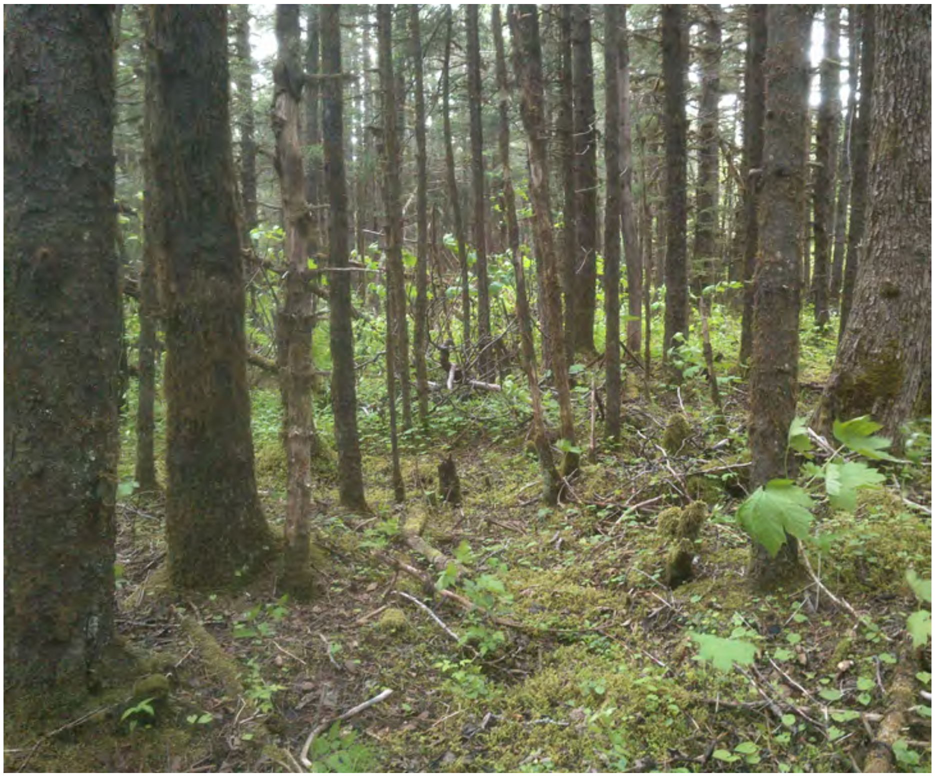

Figure 13.—Typical vegetation in map unit 20FP3.

Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Loess over alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 70 to 80 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 4s
Ecological site: Maritime Forest Gravelly Alluvial Plain (F220XY460AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Sandy, mixed Oxyaquic Cryorthents

Typical Profile
Oa—0 to 4 centimeters; highly decomposed plant material
A—4 to 16 centimeters; very fine sandy loam
Bw—16 to 24 centimeters; fine sandy loam
BC—24 to 49 centimeters; sandy loam
2C—49 to 150 centimeters; gravelly coarse sand

Characteristics of the Ashmun, Frequently Ponded, Soil

Setting
Landform: Depressions on alluvial flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 2 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 3.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Shrub Sandy Drainageways (R220XY461AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oa—0 to 1 centimeter; muck
Cg1—1 to 15 centimeters; coarse sand
Cg2—15 to 150 centimeters; gravelly coarse sand

Characteristics of the Drybay Soil

Setting
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 10 percent
Parent material: Silty eolian deposits over sandy and gravelly alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Alluvial Plain (F220XY460AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile
Oe—0 to 2 centimeters; moderately decomposed plant material
A—2 to 11 centimeters; silt loam
2C1—11 to 24 centimeters; very gravelly coarse sandy loam
2C2—24 to 60 centimeters; extremely gravelly coarse sand
2C3—60 to 150 centimeters; extremely gravelly coarse sand

20FPL—Cryaquepts-Typic Cryaquents-Water complex, estuaries, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains (fig. 14)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 75 meters
Mean annual precipitation: 3,556 to 4,318 millimeters
Mean annual air temperature: 2 to 6 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Cryaquepts and similar soils: 40 percent
Typic Cryaquents and similar soils: 30 percent
Water: 30 percent

Characteristics of the Cryaquepts

Setting
Landform: Depressions on shore complexes
Landform position (three-dimensional): Dip and talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Aspect range: All aspects

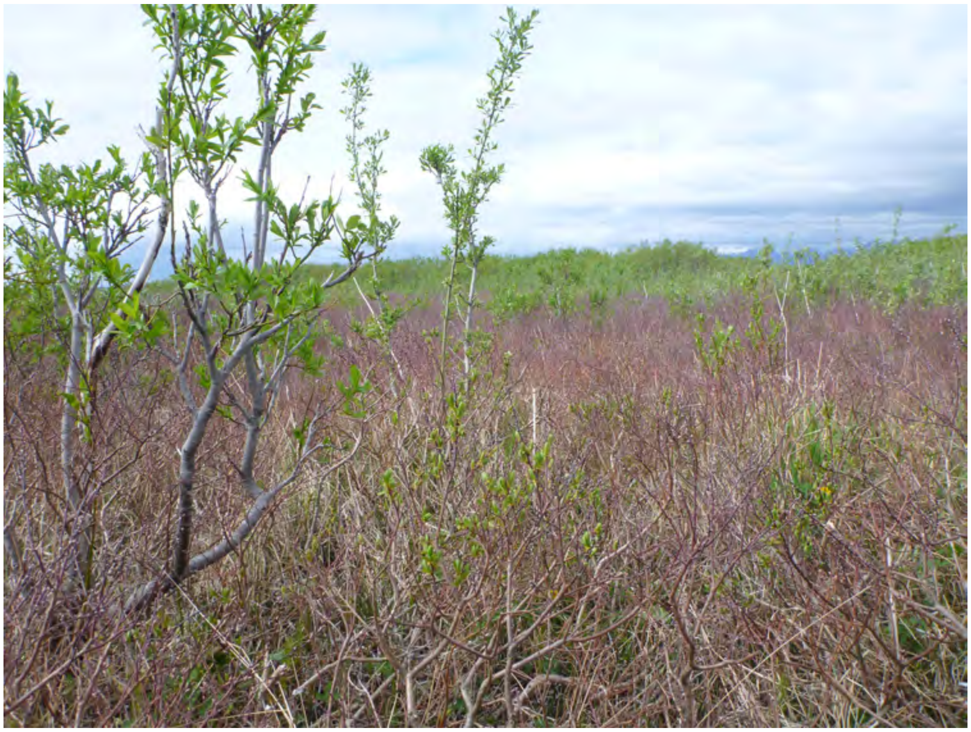

Figure 14.—Typical vegetation in map unit 20FPL.

Slope range: 0 to 5 percent
Parent material: Alluvium

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.5 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: Frequent (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): About 15 to 46 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 5.0 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Cryaquepts

Typical Profile

Oe—0 to 10 centimeters; moderately decomposed plant material
A—10 to 15 centimeters; gravelly loam
Bg—15 to 28 centimeters; gravelly loam
C—28 to 152 centimeters; stratified very gravelly sand to sandy loam

Characteristics of the Typic Cryaquents

Setting
Landform: Shore complexes and flood plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium, marine deposits, and/or glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: Frequent (see table 19)
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface, perched (see table 19)
Available water capacity (entire profile): Very low (about 5.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat
Oa—4 to 8 centimeters; muck
Cg1—8 to 16 centimeters; gravelly coarse sandy loam
Cg2—16 to 38 centimeters; extremely gravelly coarse sand
Cg3—38 to 152 centimeters; extremely gravelly coarse sand

Description of Water

This component consists of areas of water, including ponds, lakes, and rivers.

20FPM—Typic Cryaquents, flood plains, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 61 meters
Mean annual precipitation: 3,556 to 4,318 millimeters
Mean annual air temperature: 2 to 6 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Typic Cryaquents and similar soils: 85 percent
Dissimilar minor components: 15 percent

Characteristics of the Typic Cryaquents

Setting

Landform: Flood plains on alluvial plains and outwash plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave, linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium, marine deposits, and/or glacial outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: Rare (see table 19)
Seasonal water table (depth, kind): At the soil surface to 57 centimeters, perched (see table 19)
Available water capacity (entire profile): High (about 29.2 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Typic Cryaquents

Typical Profile

Oi—0 to 3 centimeters; peat
Oa—3 to 7 centimeters; muck
A—7 to 9 centimeters; silt loam
C1—9 to 19 centimeters; silt loam
C2—19 to 29 centimeters; silt loam
Cg—29 to 152 centimeters; silt loam

Minor Components

Aquic Cryorthents

Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Flood plains on alluvial plains
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: No

Water

Percent of map unit: 5 percent

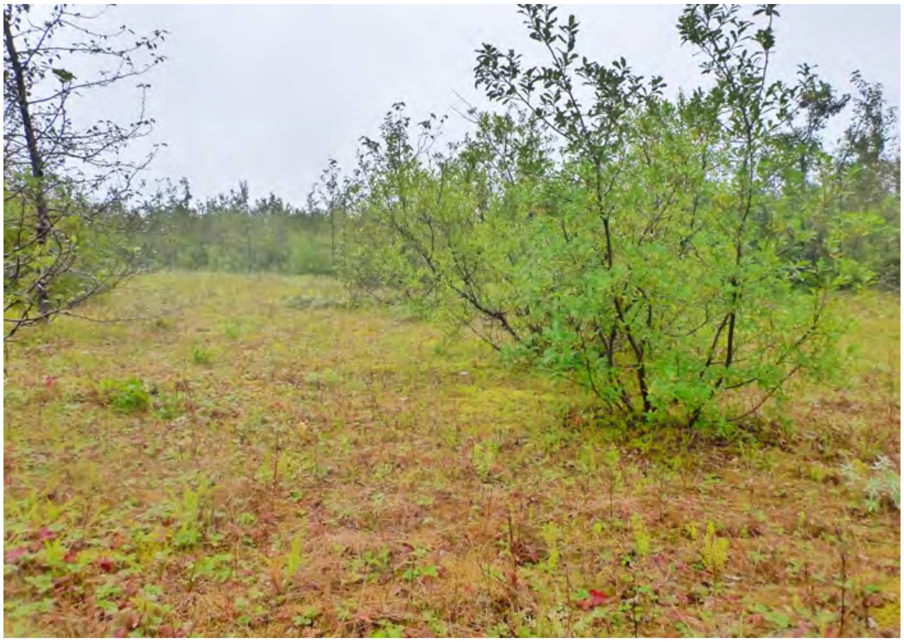

Figure 15.—Typical vegetation in map unit 20FPY.

20FPY—Oxyaquic Cryorthents-Typic Cryaquents association, flood plains, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains (fig. 15)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 61 meters
Mean annual precipitation: 3,556 to 4,318 millimeters
Mean annual air temperature: 2 to 6 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Oxyaquic Cryorthents and similar soils: 60 percent
Typic Cryaquents and similar soils: 25 percent
Dissimilar minor components: 15 percent

Characteristics of the Oxyaquic Cryorthents

Setting
Landform: Flood plains on alluvial plains
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium and/or glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: Rare (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): About 45 to 152 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 5.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Oxyaquic Cryorthents

Typical Profile
Oe—0 to 8 centimeters; moderately decomposed plant material
A—8 to 15 centimeters; gravelly sand
C1—15 to 38 centimeters; gravelly coarse sand
C2—38 to 152 centimeters; very gravelly coarse sand

Characteristics of the Typic Cryaquents

Setting
Landform: Flood plains on alluvial plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium, glaciomarine deposits, and/or glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: Rare (see table 19)
Seasonal water table (depth, kind): About 15 to 61 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 14.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)

Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Typic Cryaquents

Typical Profile
Oe—0 to 5 centimeters; mucky peat
A—5 to 13 centimeters; fine sandy loam
C1—13 to 43 centimeters; loamy sand
C2—43 to 75 centimeters; stratified fine sandy loam to loamy fine sand
Cg—75 to 152 centimeters; very fine sandy loam

Minor Components

Typic Cryopsamments
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Flood plains on alluvial plains
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No

Water
Percent of map unit: 5 percent

20FPZ—Typic Cryorthents-Typic Cryofluvents association, flood plains, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains
Major land resource area (MLRA): 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 91 meters
Mean annual precipitation: 3,556 to 4,318 millimeters
Mean annual air temperature: 2 to 6 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Typic Cryorthents and similar soils: 60 percent
Typic Cryofluvents and similar soils: 30 percent
Dissimilar minor components: 10 percent

Characteristics of the Typic Cryorthents

Setting
Landform: Flood plains on alluvial plains
Landform position (three-dimensional): Talf and rise
Down-slope shape: Concave, linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline

Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: Very rare (see table 19)
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 2.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Typic Cryorthents

Typical Profile
Oe—0 to 3 centimeters; moderately decomposed plant material
A—3 to 8 centimeters; gravelly sandy loam
C1—8 to 20 centimeters; extremely gravelly loamy sand
C2—20 to 30 centimeters; extremely gravelly coarse sand
C3—30 to 152 centimeters; extremely gravelly coarse sand

Characteristics of the Typic Cryofluvents

Setting
Landform: Flood plains on alluvial plains
Landform position (three-dimensional): Dip and talf
Down-slope shape: Linear, concave
Across-slope shape: Concave, linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium and/or glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.5 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 8.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Typic Cryofluvents

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
A—10 to 13 centimeters; sandy loam
C—13 to 18 centimeters; loamy sand
Ab—18 to 23 centimeters; sandy loam
Bwb—23 to 31 centimeters; loamy sand
C´—31 to 36 centimeters; sand
ABb—36 to 49 centimeters; loamy sand
C´´—49 to 152 centimeters; sand

Minor Components

Typic Haplocryods
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Flood plains on alluvial plains
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No

20GP1—Gustavus-Ibach-Scidmore complex, 0 to 30 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 16)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 2.0 to 45 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Gustavus and similar soils: 35 percent
Ibach and similar soils: 35 percent
Scidmore and similar soils: 25 percent
Dissimilar minor components 5 percent

Characteristics of the Gustavus Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 15 to 30 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High

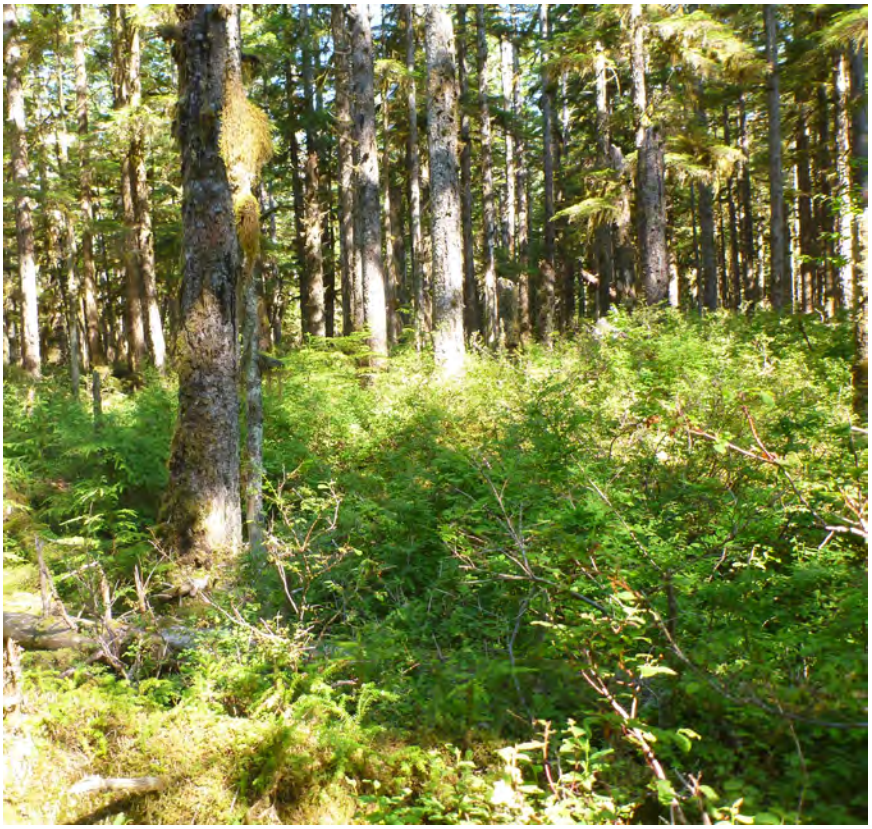

Figure 16.—Typical vegetation in map unit 20GP1.

Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 11.4 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Haplocryepts

Typical Profile

Oe—0 to 12 centimeters; moderately decomposed plant material
Bw—12 to 33 centimeters; fine sandy loam
C1—33 to 68 centimeters; loamy sand
C2—68 to 140 centimeters; loamy sand
C3—140 to 150 centimeters; coarse sand

Characteristics of the Ibach Soil

Setting

Landform: Moraines
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear

Aspect range: All aspects
Slope range: 15 to 30 percent
Parent material: Till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 8.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Loamy-skeletal, mixed, superactive Typic Humicryepts

Typical Profile
Oi—0 to 9 centimeters; slightly decomposed plant material
A—9 to 27 centimeters; bouldery silt loam
C1—27 to 56 centimeters; extremely bouldery sandy loam
C2—56 to 73 centimeters; extremely gravelly sandy loam
C3—73 to 150 centimeters; extremely gravelly sandy loam

Characteristics of the Scidmore Soil

Setting
Landform: Pitted outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 50 to 55 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 6.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Aquic Haplocryepts

Typical Profile
Oe—0 to 3 centimeters; moderately decomposed plant material
A—3 to 9 centimeters; sandy loam
Bw—9 to 31 centimeters; loamy sand
C—31 to 50 centimeters; sand
Cg—50 to 150 centimeters; coarse sand

Minor Components

Water
Percent of map unit: 5 percent

20Hl1—Foad-Boussole complex, 25 to 65 percent slopes

Map Unit Setting

Landscape: Hills (fig. 17)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 12.0 to 250 meters
Mean annual precipitation: 1,780 to 3,312 millimeters
Mean annual air temperature: 3 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Foad and similar soils: 65 percent
Boussole and similar soils: 20 percent
Dissimilar minor components: 15 percent

Characteristics of the Foad Soil

Setting
Landform: Glaciated hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 25 to 65 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained

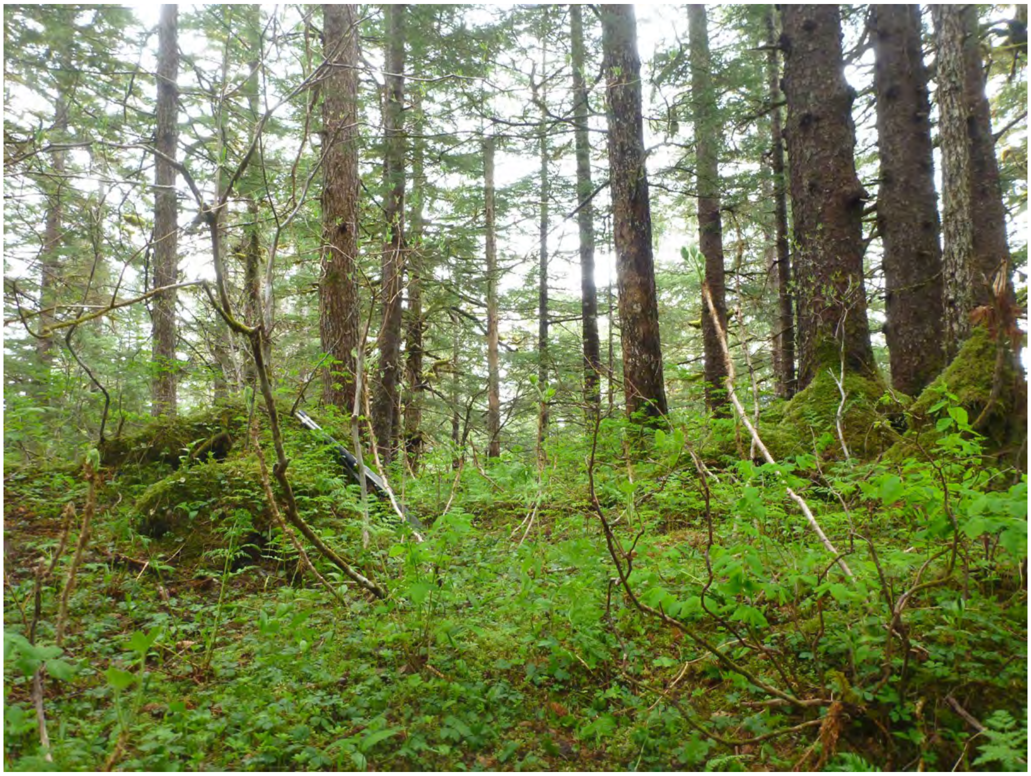

Figure 17.—Typical vegetation in map unit 20HI1.

Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 13.4 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Gravelly Slopes (F220XY441AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Loamy-skeletal, mixed, superactive Typic Humicryods

Typical Profile

Oe—0 to 5 centimeters; moderately decomposed plant material
Oa—5 to 10 centimeters; highly decomposed plant material
EA—10 to 15 centimeters; very cobbly silt loam
Bhs—15 to 84 centimeters; very cobbly silt loam
2R—84 to 200 centimeters; bedrock

Characteristics of the Boussole Soil

Setting

Landform: Mountain valleys
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Concave
Aspect, representative: Northeast
Aspect range: Northwest to southeast (clockwise)

Slope range: 25 to 60 percent
Parent material: Organic material over colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.5 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Somewhat poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 35 to 45 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 15.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes Steep (F220XY442AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy, mixed, superactive Lithic Humicryepts

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
Oa—10 to 28 centimeters; highly decomposed plant material
A1—28 to 41 centimeters; silt loam
A2—41 to 51 centimeters; gravelly sandy loam
2R—51 to 200 centimeters; bedrock

Minor Components

Kashoto soils
Percent of map unit: 10 percent
Slope: 0 to 8 percent
Landform: Muskegs on glaciated plains
Ecological site: Maritime Woodland Peat Plain Depression (F220XY434AK)
Hydric soil status: Yes

Rock outcrop
Percent of map unit: 5 percent
Slope: 25 to 100 percent

20HI2—Kashoto-Foad-Kutskloh complex, 2 to 55 percent slopes

Map Unit Setting

Landscape: Till plains (figs. 18 and 19)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 250 meters
Mean annual precipitation: 1,780 to 3,312 millimeters
Mean annual air temperature: 2 to 7 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

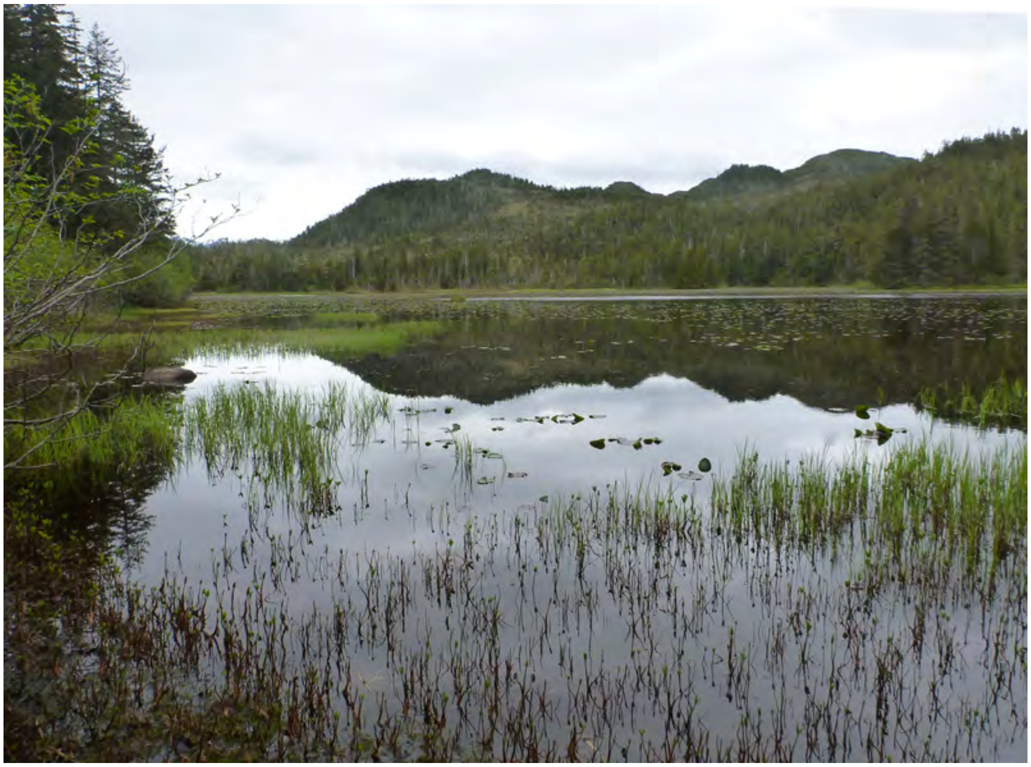

Figure 18.—Till plain dip filled with water in map unit 20Hl2.

Map Unit Composition

Kashoto and similar soils: 35 percent
Foad and similar soils: 25 percent
Kutskloh and similar soils: 20 percent
Dissimilar minor components: 20 percent

Characteristics of the Kashoto Soil

Setting

Landform: Muskegs on glaciated plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 2 to 8 percent
Parent material: Mossy organic material

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None

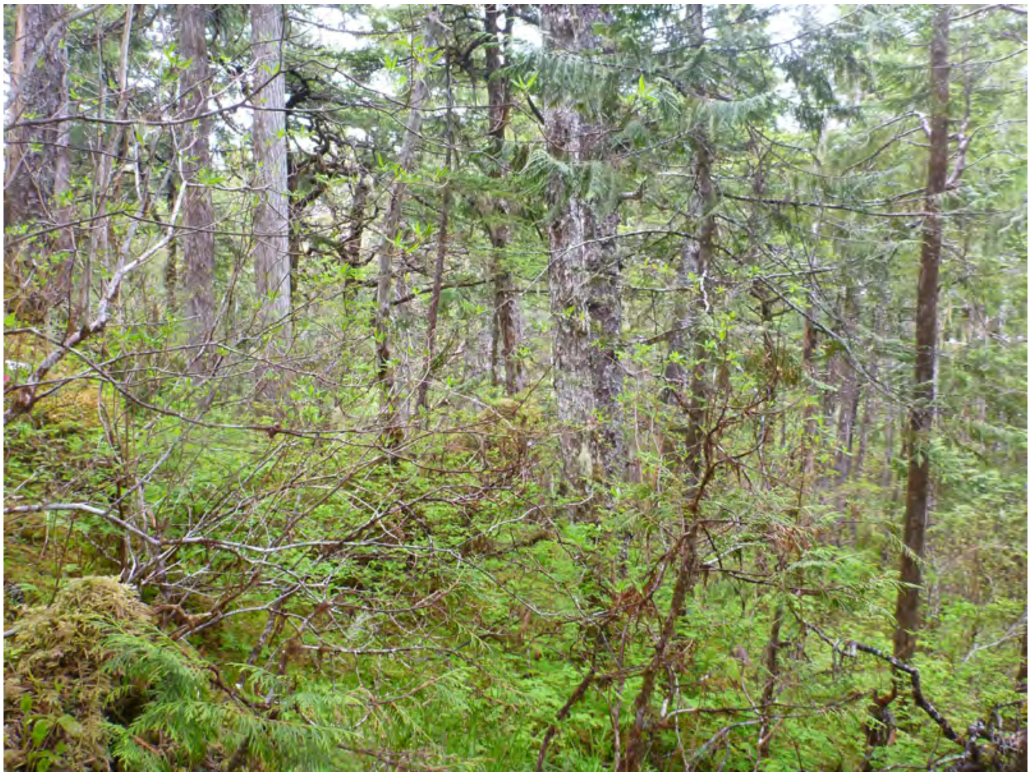

Figure 19.—Typical vegetation in map unit 20HI2.

Seasonal water table (depth, kind): About 10 to 22 centimeters, perched (see table 19)
Available water capacity (entire profile): Very high (about 67.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Woodland Peat Plain Depression (F220XY434AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Dysic Typic Cryosaprists

Typical Profile
Oi—0 to 18 centimeters; peat
Oe—18 to 56 centimeters; mucky peat
Oa—56 to 150 centimeters; muck

Characteristics of the Foad Soil

Setting
Landform: Glaciated hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 10 to 55 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock

Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 13.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Gravelly Slopes (F220XY441AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Loamy-skeletal, mixed, superactive Typic Humicryods

Typical Profile
Oe—0 to 5 centimeters; moderately decomposed plant material
Oa—5 to 10 centimeters; highly decomposed plant material
EA—10 to 15 centimeters; very cobbly silt loam
Bhs—15 to 84 centimeters; very cobbly silt loam
2R—84 to 200 centimeters; bedrock

Characteristics of the Kutskloh Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Concave
Aspect, representative: Northwest
Aspect range: Southwest to northeast (clockwise)
Slope range: 15 to 40 percent
Parent material: Organic material over colluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 20 to 30 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 17.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Organic Slopes (F220XY447AK)
Hydric soil status: No

Hydrologic soil group: B/D
Soil classification: Loamy-skeletal, mixed, superactive Oxyaquic Humicryepts

Typical Profile
Oe—0 to 9 centimeters; moderately decomposed plant material
Oa—9 to 21 centimeters; highly decomposed plant material
A1—21 to 30 centimeters; gravelly silt loam
A2—30 to 150 centimeters; extremely stony silt loam

Minor Components

Boussole soils
Percent of map unit: 10 percent
Slope: 30 to 60 percent
Landform: Mountain valleys
Ecological site: Maritime Forest Loamy Slopes Steep (F220XY442AK)
Hydric soil status: No

Charpentier soils
Percent of map unit: 10 percent
Slope: 3 to 15 percent
Landform: Muskegs on mountain slopes
Ecological site: Maritime Woodland Peat Plain Depression (F220XY434AK)
Hydric soil status: Yes

20Hl3—Polkapenn-Dagelet-Nunatak complex, 20 to 65 percent slopes

Map Unit Setting

Landscape: Glaciated hills (fig. 20)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 275 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Polkapenn and similar soils: 35 percent
Dagelet and similar soils: 25 percent
Nunatak and similar soils: 20 percent
Dissimilar minor components: 20 percent

Characteristics of the Polkapenn Soil

Setting
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 25 to 60 percent
Parent material: Till over residuum

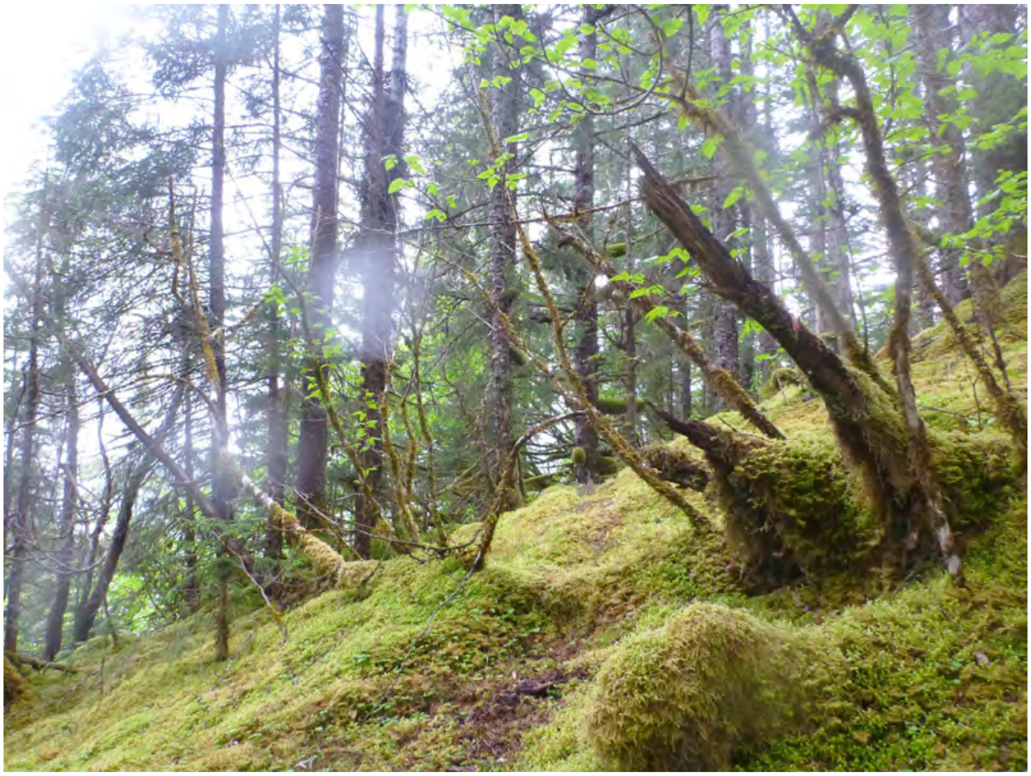

Figure 20.—Mountain side slope in map unit 20HI3.

Properties and Qualities

Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.9 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Plains (F220XY440AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents

Typical Profile

Oi—0 to 10 centimeters; slightly decomposed plant material
A—10 to 22 centimeters; extremely cobbly coarse sandy loam
C—22 to 42 centimeters; very cobbly coarse sandy loam
2R—42 to 200 centimeters; bedrock

Characteristics of the Dagelet Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: Southwest
Aspect range: Southeast to northwest (clockwise)
Slope range: 20 to 55 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive, nonacid Typic Cryorthents

Typical Profile
Oe—0 to 3 centimeters; moderately decomposed plant material
A—3 to 8 centimeters; gravelly sandy loam
AC—8 to 37 centimeters; very gravelly coarse sandy loam
C—37 to 60 centimeters; very gravelly coarse sandy loam
2R—60 to 200 centimeters; bedrock

Characteristics of the Nunatak Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect, representative: West
Aspect range: South to north (clockwise)
Slope range: 25 to 65 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 100 to 150 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline

Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive Typic Haplocryepts

Typical Profile
Oe—0 to 3 centimeters; moderately decomposed plant material
A—3 to 10 centimeters; gravelly sandy loam
Bw—10 to 36 centimeters; very gravelly coarse sandy loam
C—36 to 113 centimeters; very gravelly coarse sandy loam
2R—113 to 200 centimeters; bedrock

Minor Components

Rock outcrop
Percent of map unit: 10 percent
Slope: 25 to 75 percent

Seclusion soils
Percent of map unit: 10 percent
Slope: 40 to 80 percent
Landform: Escarpments
Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)
Hydric soil status: No

20HI5—Kaknau-Tricklake complex, 20 to 65 percent slopes

Map Unit Setting

Landscape: Hills (fig. 21)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 30.0 to 200 meters
Mean annual precipitation: 850 to 6,356 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Kaknau and similar soils: 45 percent
Tricklake and similar soils: 35 percent
Dissimilar minor components: 20 percent

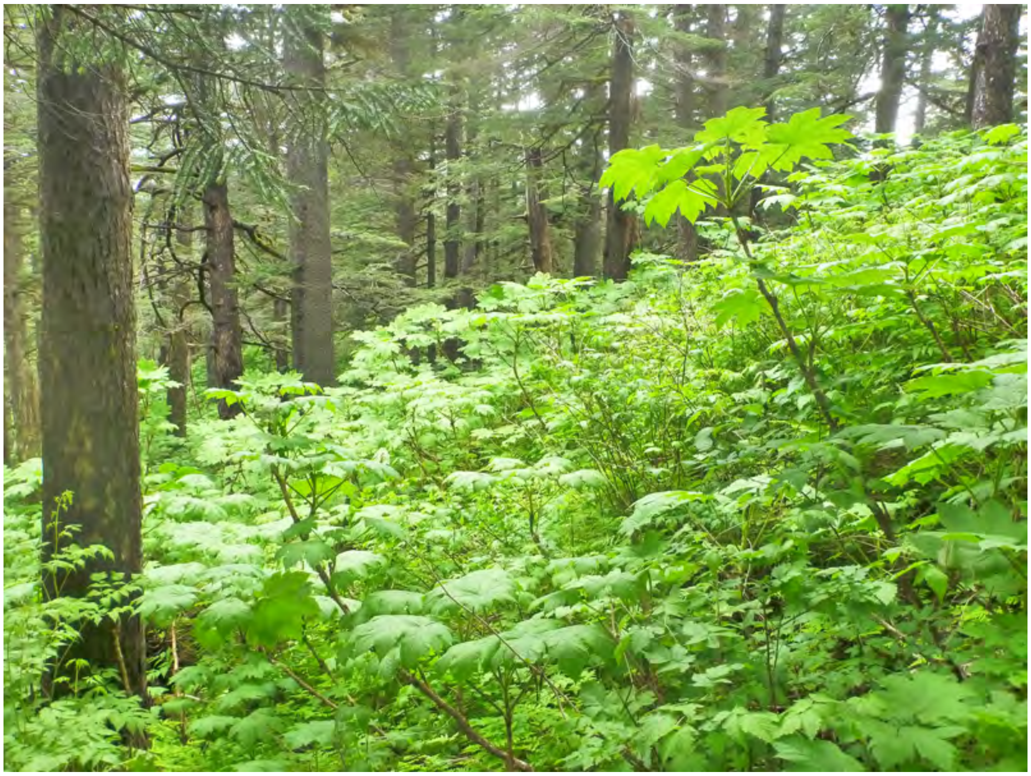

Figure 21.—Typical vegetation in map unit 20HI5.

Characteristics of the Kaknau Soil

Setting

Landform: Glacially modified hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: South
Aspect range: All aspects
Slope range: 20 to 60 percent
Parent material: Colluvium over residuum

Properties and Qualities

Depth to restrictive feature: 50 to 100 centimeters to paralithic bedrock
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 14.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes Warm (F220XY468AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Coarse-loamy, mixed, superactive Typic Haplocryepts

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 12 centimeters; very fine sandy loam
Bw—12 to 40 centimeters; cobbly very fine sandy loam
B/C—40 to 87 centimeters; silt loam
2Cr—87 to 200 centimeters; bedrock

Characteristics of the Tricklake Soil

Setting
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 20 to 65 percent
Parent material: Noncalcareous loess

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Moderate (about 21.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Gravelly Slopes (F220XY441AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Coarse-loamy, mixed, superactive Typic Haplocryolls

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 22 centimeters; silt loam
Bw1—22 to 56 centimeters; fine sandy loam
Bw2—56 to 150 centimeters; fine sandy loam

Minor Components

Crillon soils
Percent of map unit: 10 percent
Slope: 10 to 25 percent

Landform: Drumlinoid ridges
Ecological site: Maritime Scrub Loamy Slopes (R220XY465AK)
Hydric soil status: No

Grandplateau soils
Percent of map unit: 10 percent
Slope: 3 to 10 percent
Landform: Glacially modified hillslopes
Ecological site: Maritime Forest Loamy Slopes Cold (F220XY464AK)
Hydric soil status: Yes

20HIB—Drybay-Kaknau-Vivid complex, 5 to 35 percent slopes

Map Unit Setting

Landscape: Alluvial plains (fig. 22)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 200 meters
Mean annual precipitation: 850 to 6,356 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Drybay and similar soils: 35 percent
Kaknau and similar soils: 30 percent
Vivid and similar soils: 25 percent
Dissimilar minor components: 10 percent

Characteristics of the Drybay Soil

Setting
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 5 to 10 percent
Parent material: Silty eolian deposits over sandy and gravelly alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

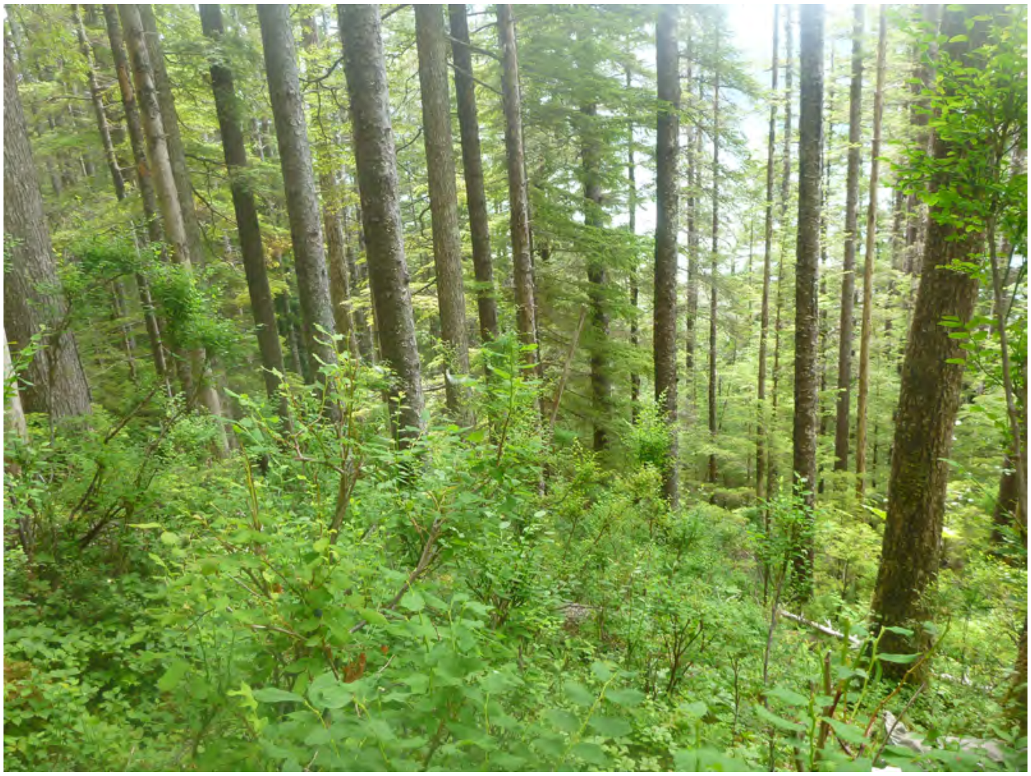

Figure 22.—Typical vegetation in map unit 20HIB.

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Alluvial Plain (F220XY460AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile

Oe—0 to 2 centimeters; moderately decomposed plant material
A—2 to 11 centimeters; silt loam
2C1—11 to 24 centimeters; very gravelly coarse sandy loam
2C2—24 to 60 centimeters; extremely gravelly coarse sand
2C3—60 to 150 centimeters; extremely gravelly coarse sand

Characteristics of the Kaknau Soil

Setting

Landform: Glacially modified hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: South
Aspect range: All aspects
Slope range: 10 to 35 percent
Parent material: Colluvium over residuum

Properties and Qualities

Depth to restrictive feature: 50 to 100 centimeters to paralithic bedrock

Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 14.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes Warm (F220XY468AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Coarse-loamy, mixed, superactive Typic Haplocryepts

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 12 centimeters; very fine sandy loam
Bw—12 to 40 centimeters; cobbly very fine sandy loam
B/C—40 to 87 centimeters; silt loam
2Cr—87 to 200 centimeters; bedrock

Characteristics of the Vivid Soil

Setting
Landform: Glacial-valley floors
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 5 to 8 percent
Parent material: Lacustrine deposits over till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.6 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Occasional (see table 19)
Seasonal water table (depth, kind): About 3 to 11 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 15.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Graminoid Loamy Plain Depression (R220XY436AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryaquents

Typical Profile
Oe—0 to 8 centimeters; moderately decomposed plant material
Cg1—8 to 28 centimeters; silt
2Cg2—28 to 150 centimeters; very cobbly sandy loam

Minor Components

Water
Percent of map unit: 10 percent

20HID—Grandplateau-Crillon complex, 10 to 60 percent slopes

Map Unit Setting

Landscape: Hills (fig. 23)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 30.0 to 200 meters
Mean annual precipitation: 850 to 6,356 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Grandplateau and similar soils: 55 percent
Crillon and similar soils: 35 percent
Dissimilar minor components: 10 percent

Characteristics of the Grandplateau Soil

Setting
Landform: Glacially modified hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave
Aspect, representative: Southeast
Aspect range: Northeast to southwest (clockwise)
Slope range: 35 to 60 percent
Parent material: Volcanic ash over colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 100 to 150 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.6 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 10 to 22 centimeters, perched (see table 19)
Available water capacity (entire profile): Very high (about 35.6 centimeters)

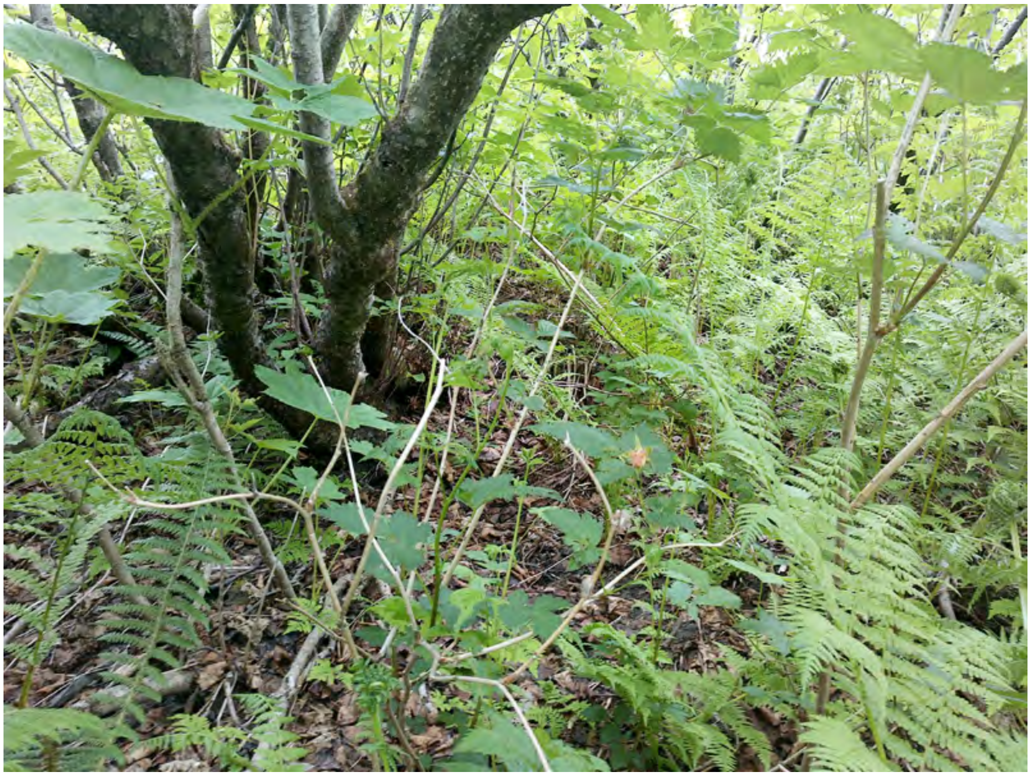

Figure 23.—Typical vegetation in map unit 20HID.

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes Cold (F220XY464AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Medial, amorphic, nonacid Typic Cryaquands

Typical Profile

Oa—0 to 2 centimeters; highly decomposed plant material
A—2 to 18 centimeters; medial very fine sandy loam
Bw1—18 to 27 centimeters; medial silt loam
E—27 to 43 centimeters; medial silt loam
Bw2—43 to 120 centimeters; medial silt loam
2Bw3—120 to 130 centimeters; extremely cobbly silt loam
3R—130 to 200 centimeters; bedrock

Characteristics of the Crillon Soil

Setting

Landform: Drumlinoid ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave
Aspect, representative: Northwest
Aspect range: Southwest to northeast (clockwise)
Slope range: 10 to 45 percent
Parent material: Colluvium over residuum

Properties and Qualities

Depth to restrictive feature: 50 to 70 centimeters to paralithic bedrock; 70 to 90 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 50 to 55 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 10.5 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Scrub Loamy Slopes (R220XY465AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Coarse-loamy, mixed, superactive, nonacid Oxyaquic Cryorthents

Typical Profile

A—0 to 10 centimeters; silt loam
Bw—10 to 20 centimeters; sandy loam
BC—20 to 60 centimeters; silt loam
2Cr—60 to 80 centimeters; bedrock
2R—80 to 200 centimeters; bedrock

Minor Components

Kaknau soils

Percent of map unit: 10 percent
Slope: 5 to 15 percent
Landform: Glacially modified hillslopes
Ecological site: Maritime Forest Loamy Slopes Warm (F220XY468AK)
Hydric soil status: No

20HIE—Kashoto-Kutskloh-Wachusett complex, 5 to 55 percent slopes

Map Unit Setting

Landscape: Till plains (fig. 24)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 250 meters
Mean annual precipitation: 1,780 to 3,312 millimeters
Mean annual air temperature: 3 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Kashoto and similar soils: 40 percent
Kutskloh and similar soils: 30 percent
Wachusett and similar soils: 20 percent
Dissimilar minor components: 10 percent

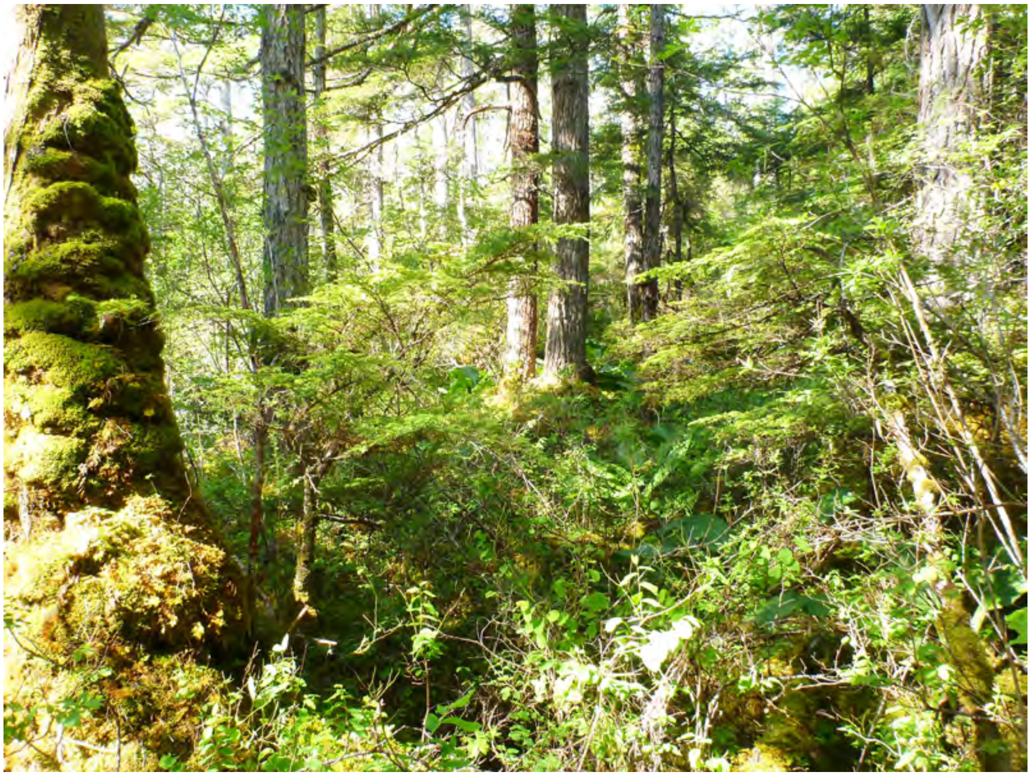

Figure 24.—Typical vegetation in map unit 20HIE.

Characteristics of the Kashoto Soil

Setting

Landform: Muskegs on glaciated plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 5 to 15 percent
Parent material: Mossy organic material

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 10 to 22 centimeters, perched (see table 19)
Available water capacity (entire profile): Very high (about 67.5 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Woodland Peat Plain Depression (F220XY434AK)

Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Dysic Typic Cryosaprists

Typical Profile
Oi—0 to 18 centimeters; peat
Oe—18 to 56 centimeters; mucky peat
Oa—56 to 150 centimeters; muck

Characteristics of the Kutskloh Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Concave
Aspect, representative: Northwest
Aspect range: Southwest to northeast (clockwise)
Slope range: 5 to 40 percent
Parent material: Organic material over colluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 20 to 30 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 17.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Organic Slopes (F220XY447AK)
Hydric soil status: No
Hydrologic soil group: B/D
Soil classification: Loamy-skeletal, mixed, superactive Oxyaquic Humicryepts

Typical Profile
Oe—0 to 9 centimeters; moderately decomposed plant material
Oa—9 to 21 centimeters; highly decomposed plant material
A1—21 to 30 centimeters; gravelly silt loam
A2—30 to 150 centimeters; extremely stony silt loam

Characteristics of the Wachusett Soil

Setting
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: South

Aspect range: East to west (clockwise)
Slope range: 20 to 55 percent
Parent material: Organic material over till over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 55 to 65 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 19.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes Steep (F220XY442AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Coarse-loamy, mixed, superactive Folistic Humicryods

Typical Profile
Oe—0 to 23 centimeters; moderately decomposed plant material
Oa—23 to 34 centimeters; highly decomposed plant material
E—34 to 41 centimeters; silt loam
Bhs—41 to 60 centimeters; channery silt loam
BC—60 to 80 centimeters; channery loam
Cg—80 to 85 centimeters; channery sandy loam
2R—85 to 200 centimeters; bedrock

Minor Components

Maquinna soils
Percent of map unit: 10 percent
Slope: 15 to 55 percent
Landform: Mountain slopes
Ecological site: Maritime Forest Gravelly Slopes (F220XY441AK)
Hydric soil status: No

20HIF—Kashoto-Wachusett complex, 2 to 25 percent slopes

Map Unit Setting

Landscape: Till plains (fig. 25)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 250 meters
Mean annual precipitation: 1,780 to 3,312 millimeters
Mean annual air temperature: 3 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

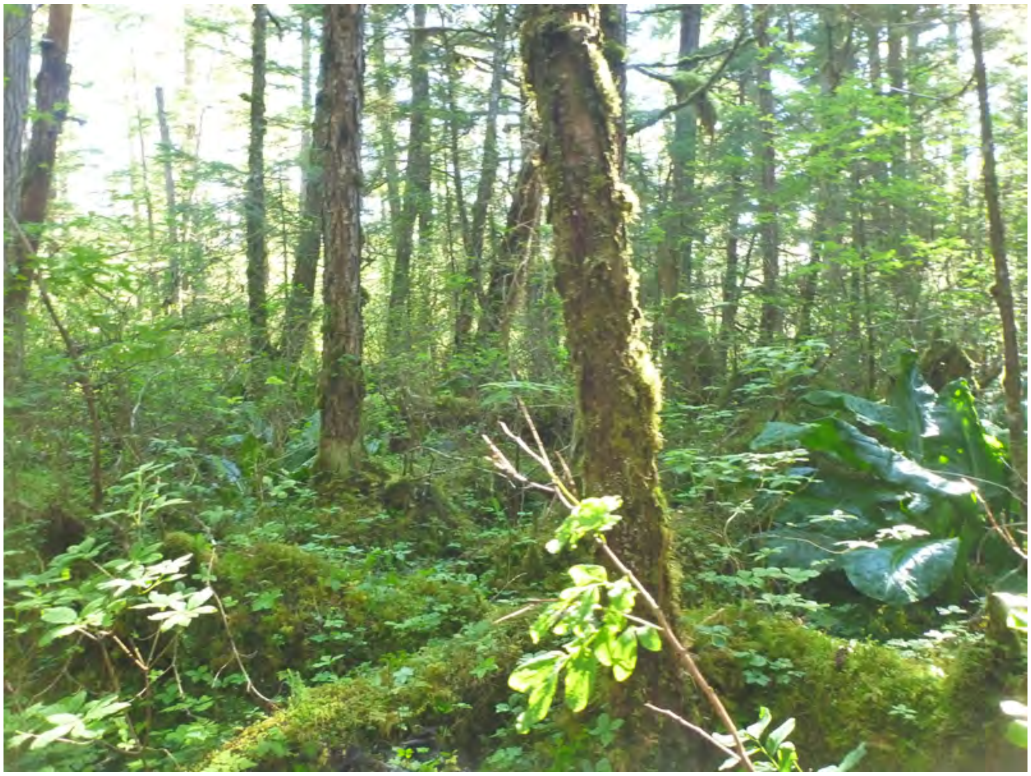

Figure 25.—Typical vegetation in map unit 20HIF.

Map Unit Composition

Kashoto and similar soils: 45 percent
Wachusett and similar soils: 35 percent
Dissimilar minor components: 20 percent

Characteristics of the Kashoto Soil

Setting

Landform: Muskegs on glaciated plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 2 to 15 percent
Parent material: Mossy organic material

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None

Seasonal water table (depth, kind): About 10 to 22 centimeters, perched (see table 19)
Available water capacity (entire profile): Very high (about 67.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Woodland Peat Plain Depression (F220XY434AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Dysic Typic Cryosaprists

Typical Profile
Oi—0 to 18 centimeters; peat
Oe—18 to 56 centimeters; mucky peat
Oa—56 to 150 centimeters; muck

Characteristics of the Wachusett Soil

Setting
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: South
Aspect range: East to west (clockwise)
Slope range: 5 to 25 percent
Parent material: Organic material over till over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 55 to 65 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 19.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Loamy Slopes Steep (F220XY442AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Coarse-loamy, mixed, superactive Folistic Humicryods

Typical Profile
Oe—0 to 23 centimeters; moderately decomposed plant material
Oa—23 to 34 centimeters; highly decomposed plant material
E—34 to 41 centimeters; silt loam
Bhs—41 to 60 centimeters; channery silt loam
BC—60 to 80 centimeters; channery loam
Cg—80 to 85 centimeters; channery sandy loam
2R—85 to 200 centimeters; bedrock

Minor Components

Kutskloh soils
Percent of map unit: 10 percent
Slope: 5 to 30 percent
Landform: Mountain slopes
Ecological site: Maritime Forest Loamy Organic Slopes (F220XY447AK)
Hydric soil status: No

Maquinna soils
Percent of map unit: 10 percent
Slope: 20 to 55 percent
Landform: Mountain slopes
Ecological site: Maritime Forest Gravelly Slopes (F220XY441AK)
Hydric soil status: No

20HIN—Polkapenn-Nunatak complex, 20 to 60 percent slopes

Map Unit Setting

Landscape: Glaciated hills (fig. 26)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 350 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Polkapenn and similar soils: 40 percent
Nunatak and similar soils: 30 percent
Dissimilar minor components: 30 percent

Characteristics of the Polkapenn Soil

Setting
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 20 to 60 percent
Parent material: Till over residuum

Properties and Qualities
Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high

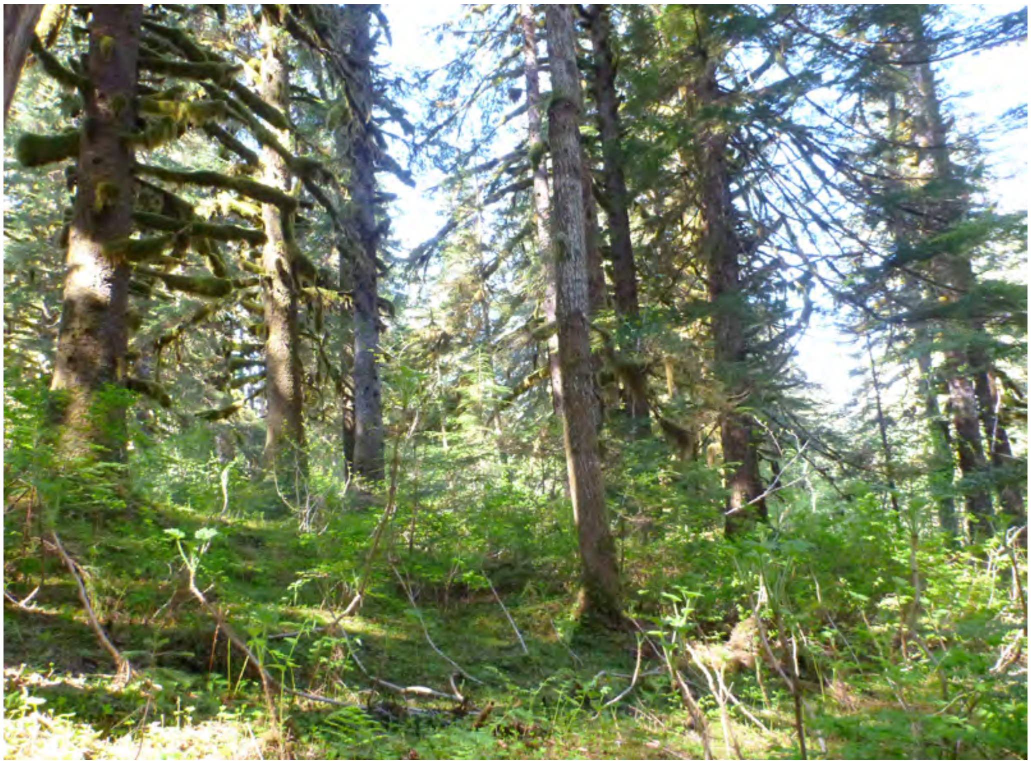

Figure 26.—Typical vegetation in map unit 20HIN.

Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.9 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Plains (F220XY440AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents

Typical Profile

Oi—0 to 10 centimeters; slightly decomposed plant material
A—10 to 22 centimeters; extremely cobbly coarse sandy loam
C—22 to 42 centimeters; very cobbly coarse sandy loam
2R—42 to 200 centimeters; bedrock

Characteristics of the Nunatak Soil

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect, representative: West
Aspect range: South to north (clockwise)
Slope range: 30 to 60 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 100 to 150 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive Typic Haplocryepts

Typical Profile
Oe—0 to 3 centimeters; moderately decomposed plant material
A—3 to 10 centimeters; gravelly sandy loam
Bw—10 to 36 centimeters; very gravelly coarse sandy loam
C—36 to 113 centimeters; very gravelly coarse sandy loam
2R—113 to 200 centimeters; bedrock

Minor Components

Escures soils
Percent of map unit: 10 percent
Slope: 60 to 80 percent
Landform: Escarpments
Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)
Hydric soil status: No

Rock outcrop
Percent of map unit: 10 percent
Slope: 30 to 80 percent

Tyeen soils
Percent of map unit: 10 percent
Slope: 2 to 10 percent
Landform: Glacial-valley floors
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

20HIS—Lithic Cryorthents and Typic Humicryepts, 76 to 140 percent slopes

Map Unit Setting

Landscape: Mountains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains

Elevation: 350.0 to 1,200 meters
Mean annual precipitation: 5,207 to 6,223 millimeters
Mean annual air temperature: -1 to 3 degrees C
Frost-free period: 30 to 100 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Lithic Cryorthents and similar soils: 46 percent
Typic Humicryepts and similar soils: 44 percent
Dissimilar minor components: 10 percent

Characteristics of the Lithic Cryorthents

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 76 to 140 percent
Parent material: Colluvium and/or residuum

Properties and Qualities
Depth to restrictive feature: 20 to 51 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 15 to 46 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 2.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 8
Ecological site: Alpine Dwarf Scrub Gravelly Slopes, Bedrock (R222XY356AK)
Hydric soil status: No
Hydrologic soil group: C/D
Soil classification: Lithic Cryorthents

Typical Profile
Oi—0 to 3 centimeters; slightly decomposed plant material
A—3 to 6 centimeters; gravelly loam
C—6 to 36 centimeters; very cobbly sandy loam
R—36 to 200 centimeters; bedrock

Characteristics of the Typic Humicryepts

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects

Slope range: 76 to 140 percent
Parent material: Colluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.5 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 46 to 91 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 11.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 8
Ecological site: Maritime Scrub Loamy Slopes (R220XY465AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Typic Humicryepts

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
A1—10 to 28 centimeters; very gravelly sandy loam
A2—28 to 35 centimeters; very gravelly loam
AC—35 to 51 centimeters; very gravelly loamy sand
C—51 to 152 centimeters; very gravelly sandy loam

Minor Components

Typic Haplocryods
Percent of map unit: 10 percent
Slope: 76 to 140 percent
Landform: Mountain slopes
Ecological site: Maritime Scrub Loamy Slopes (R220XY465AK)
Hydric soil status: No

20IS1—Cenotaph-Water, saline-Beaches complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Till plains (fig. 27)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 100 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Cenotaph and similar soils: 35 percent
Water, saline: 35 percent

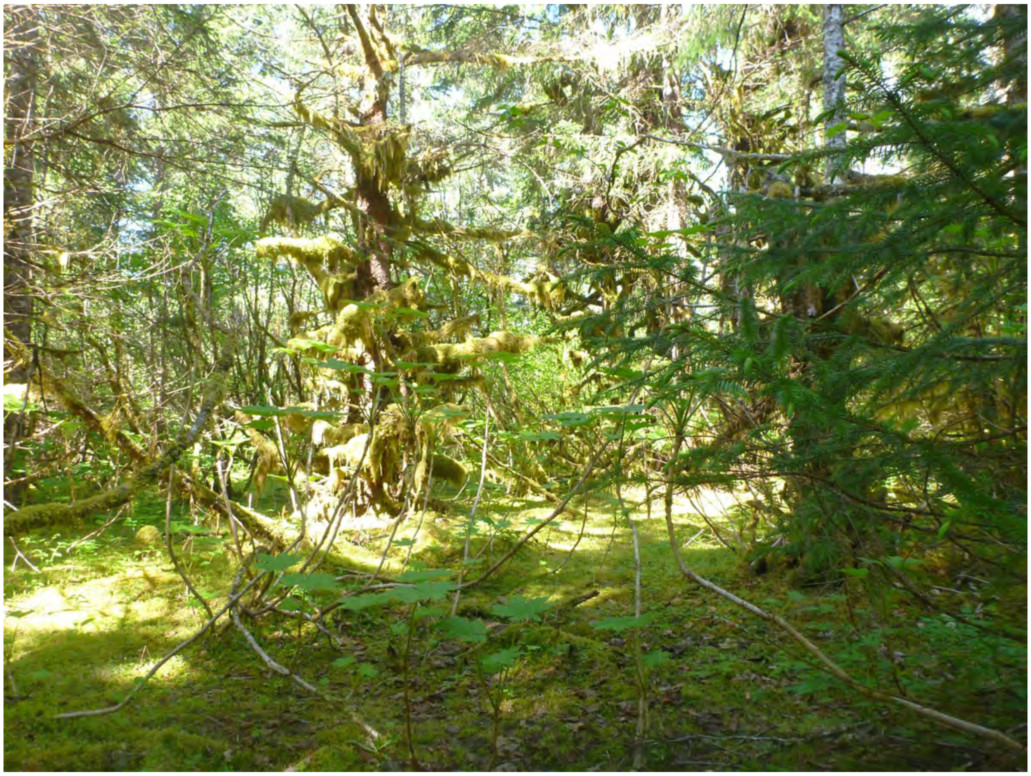

Figure 27.—Typical vegetation in map unit 20IS1.

Beaches: 20 percent
Dissimilar minor components: 10 percent

Characteristics of the Cenotaph Soil

Setting

Landform: Glacial-valley floors
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Organic material over till

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.8 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 20 to 30 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 16.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Loamy Plain Wet (F220XY435AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Coarse-loamy, mixed, superactive, calcareous Typic Cryaquents

Typical Profile
Oe—0 to 17 centimeters; moderately decomposed plant material
A—17 to 25 centimeters; gravelly fine sandy loam
Cg1—25 to 100 centimeters; gravelly fine sandy loam
Cg2—100 to 150 centimeters; gravelly loamy fine sand

Description of Water, Saline

This component consists of areas of water, including ponds, lakes, and rivers.

Description of Beaches

Beaches are sandy, gravelly, or cobbly shores that are washed and rewashed by waves. The areas may be partly covered with water during high tides or storms.

Minor Components

Lituya soils
Percent of map unit: 10 percent
Slope: 0 to 3 percent
Landform: Fluviomarine terraces
Ecological site: Estuarine Herbacous Sandy Coastal Plain (R220XY422AK)
Hydric soil status: No

20LF1—Abyss-Astrolable complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Drift plain valleys (fig. 28)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 40 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Abyss and similar soils: 55 percent
Astrolable and similar soils: 30 percent
Dissimilar minor components: 15 percent

Characteristics of the Abyss Soil

Setting
Landform: High flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Sandy alluvium

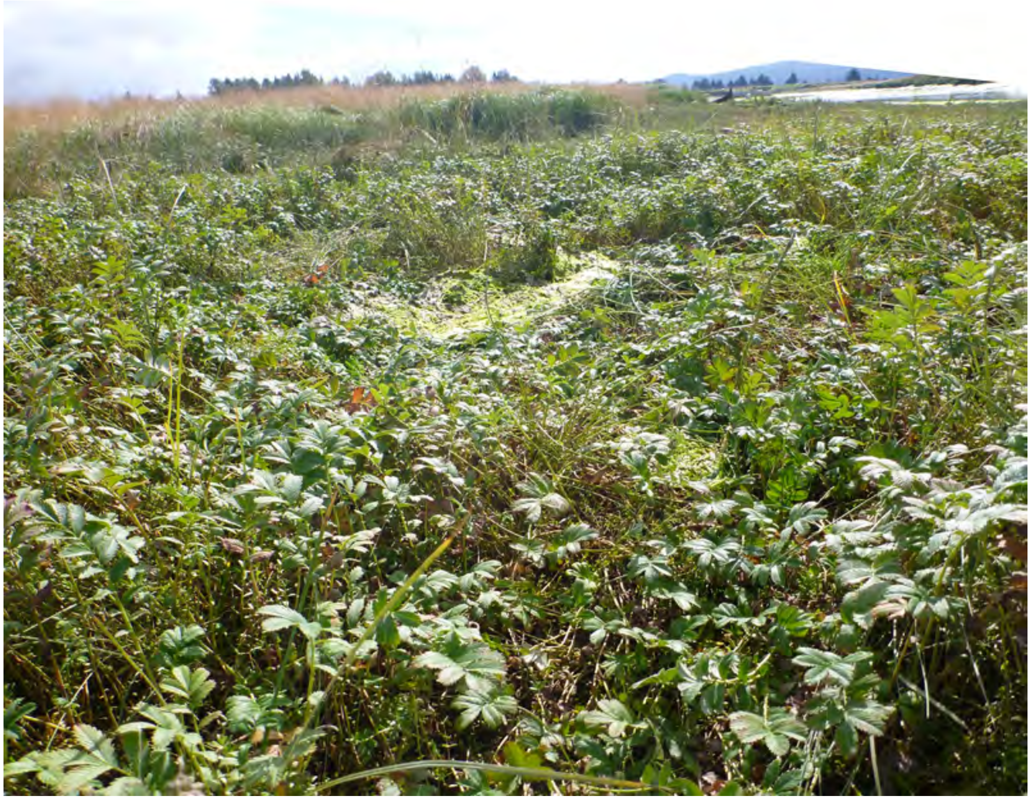

Figure 28.—Typical vegetation in map unit 20LF1.

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 1.5 LEP)
Salinity maximum based on representative value: Nonsaline (about 1.5 mmhos/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Somewhat poorly drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): About 25 to 35 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 7.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: No
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
C1—0 to 13 centimeters; loam
C2—13 to 30 centimeters; sand
Cg—30 to 150 centimeters; sand

Characteristics of the Astrolable Soil

Setting

Landform: Tidal marshes
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Marine deposits

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 2.7 LEP)
Salinity maximum based on representative value: Nonsaline (about 1.0 mmho/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: Very frequent (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 0.5 centimeter)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes
Hydrologic soil group: C/D
Soil classification: Sandy-skeletal, mixed Typic Cryaquents

Typical Profile

Cg1—0 to 25 centimeters; sandy clay loam
Cg2—25 to 150 centimeters; extremely gravelly coarse sand

Minor Components

Scidmore soils

Percent of map unit: 10 percent
Slope: 0 to 2 percent
Landform: Pitted outwash plains
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

Riverwash

Percent of map unit: 5 percent
Slope: 0 to 2 percent
Hydric soil status: Yes

20MD1—Gustavus-Perouse complex, 0 to 15 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 29)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast

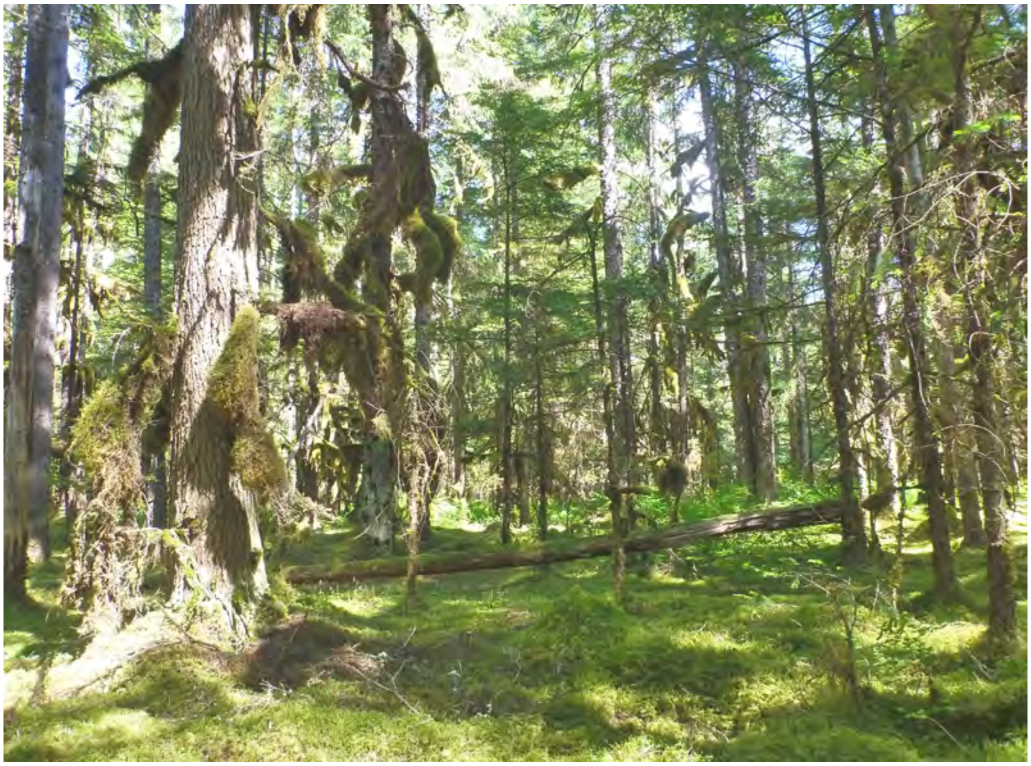

Figure 29.—Typical vegetation in map unit 20MD1.

Elevation: 1.0 to 45 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Gustavus and similar soils: 70 percent
Perouse and similar soils: 20 percent
Dissimilar minor components: 10 percent

Characteristics of the Gustavus Soil

Setting

Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 5 to 15 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 11.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Haplocryepts

Typical Profile
Oe—0 to 12 centimeters; moderately decomposed plant material
Bw—12 to 33 centimeters; fine sandy loam
C1—33 to 68 centimeters; loamy sand
C2—68 to 140 centimeters; loamy sand
C3—140 to 150 centimeters; coarse sand

Characteristics of the Perouse Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 2 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat

Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand
Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

Minor Components

Scidmore soils
Percent of map unit: 10 percent
Slope: 0 to 3 percent
Landform: Pitted outwash plains
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

20MF1—Geikie-Gustavus-Scidmore complex, 0 to 8 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 30)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 1.0 to 45 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Geikie and similar soils: 55 percent
Gustavus and similar soils: 30 percent
Scidmore and similar soils: 15 percent

Characteristics of the Geikie Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 8 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 1.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 12.0 centimeters)

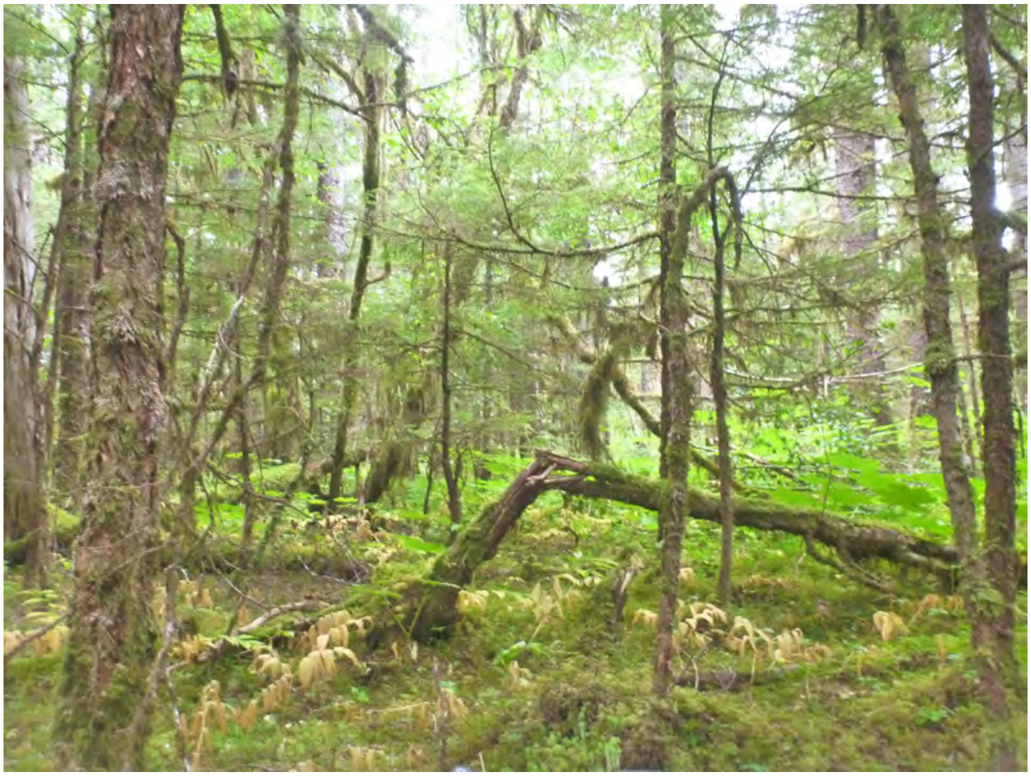

Figure 30.—Typical vegetation in map unit 20MF1.

Interpretive Groups

Land capability subclass (nonirrigated): 4e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Coarse-loamy over sandy or sandy-skeletal, mixed, superactive Typic Haplocryepts

Typical Profile

A—0 to 7 centimeters; loam
Bw—7 to 32 centimeters; loam
C—32 to 48 centimeters; silt loam
2C1—48 to 120 centimeters; sand
2C2—120 to 150 centimeters; gravelly sand

Characteristics of the Gustavus Soil

Setting

Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 8 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)

Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 11.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Haplocryepts

Typical Profile
Oe—0 to 12 centimeters; moderately decomposed plant material
Bw—12 to 33 centimeters; fine sandy loam
C1—33 to 68 centimeters; loamy sand
C2—68 to 140 centimeters; loamy sand
C3—140 to 150 centimeters; coarse sand

Characteristics of the Scidmore Soil

Setting
Landform: Pitted outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 2 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 50 to 55 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 6.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Aquic Haplocryepts

Typical Profile
Oe—0 to 3 centimeters; moderately decomposed plant material
A—3 to 9 centimeters; sandy loam
Bw—9 to 31 centimeters; loamy sand
C—31 to 50 centimeters; sand
Cg—50 to 150 centimeters; coarse sand

20MF2—Gustavus-Geikie complex, 0 to 10 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 31)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 1.0 to 45 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Gustavus and similar soils: 60 percent
Geikie and similar soils: 30 percent
Dissimilar minor components: 10 percent

Characteristics of the Gustavus Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 5 to 10 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 11.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Haplocryepts

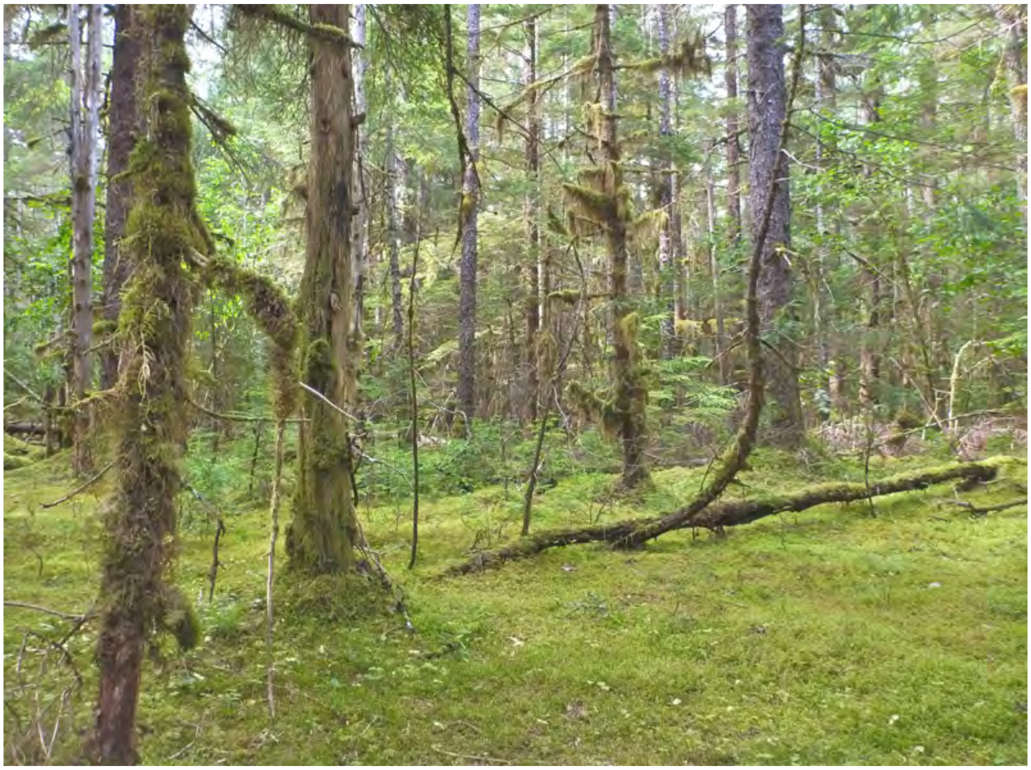

Figure 31.—Typical vegetation in map unit 20MF2.

Typical Profile
Oe—0 to 12 centimeters; moderately decomposed plant material
Bw—12 to 33 centimeters; fine sandy loam
C1—33 to 68 centimeters; loamy sand
C2—68 to 140 centimeters; loamy sand
C3—140 to 150 centimeters; coarse sand

Characteristics of the Geikie Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 1.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None

Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 12.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 4s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Coarse-loamy over sandy or sandy-skeletal, mixed, superactive Typic Haplocryepts

Typical Profile
A—0 to 7 centimeters; loam
Bw—7 to 32 centimeters; loam
C—32 to 48 centimeters; silt loam
2C1—48 to 120 centimeters; sand
2C2—120 to 150 centimeters; gravelly sand

Minor Components

Scidmore soils
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Pitted outwash plains
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

20MT1—Bearisland-Kadachan-Rubble land complex, 15 to 45 percent slopes

Map Unit Setting

Landscape: Mountains (figs. 32 and 33)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 20.0 to 350 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Bearisland and similar soils: 35 percent
Kadachan and similar soils: 30 percent
Rubble land: 25 percent
Dissimilar minor components: 10 percent

Characteristics of the Bearisland Soil

Setting
Landform: Moraines in mountain valleys
Landform position (three-dimensional): Lower third of mountainflank and center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: Southeast

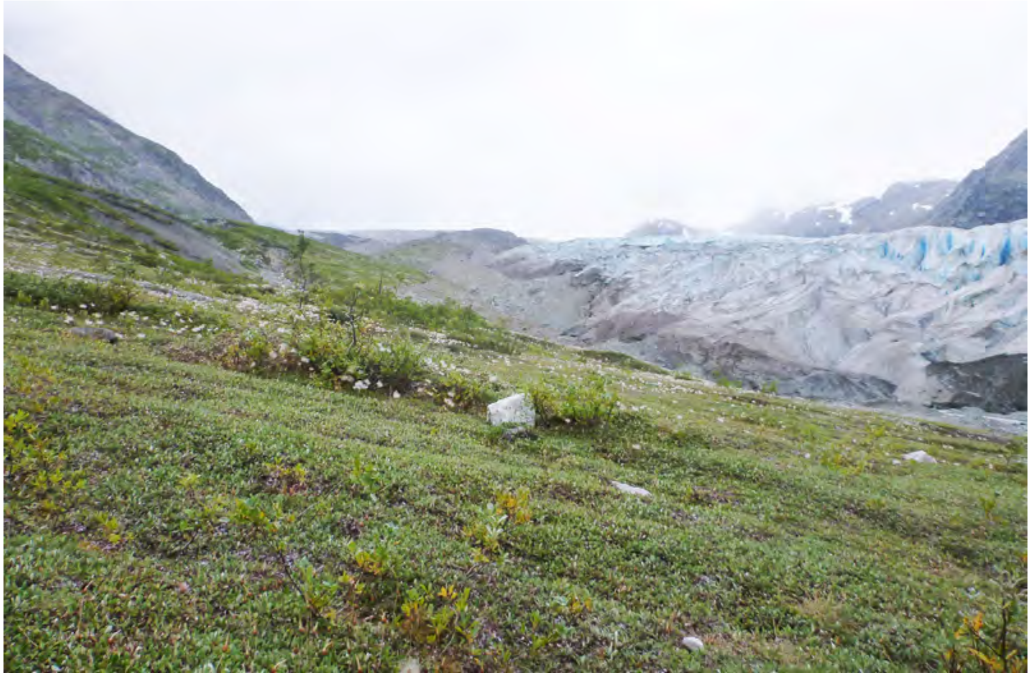

Figure 32.—Moraines on moutain valleys in map unit 20MT1.

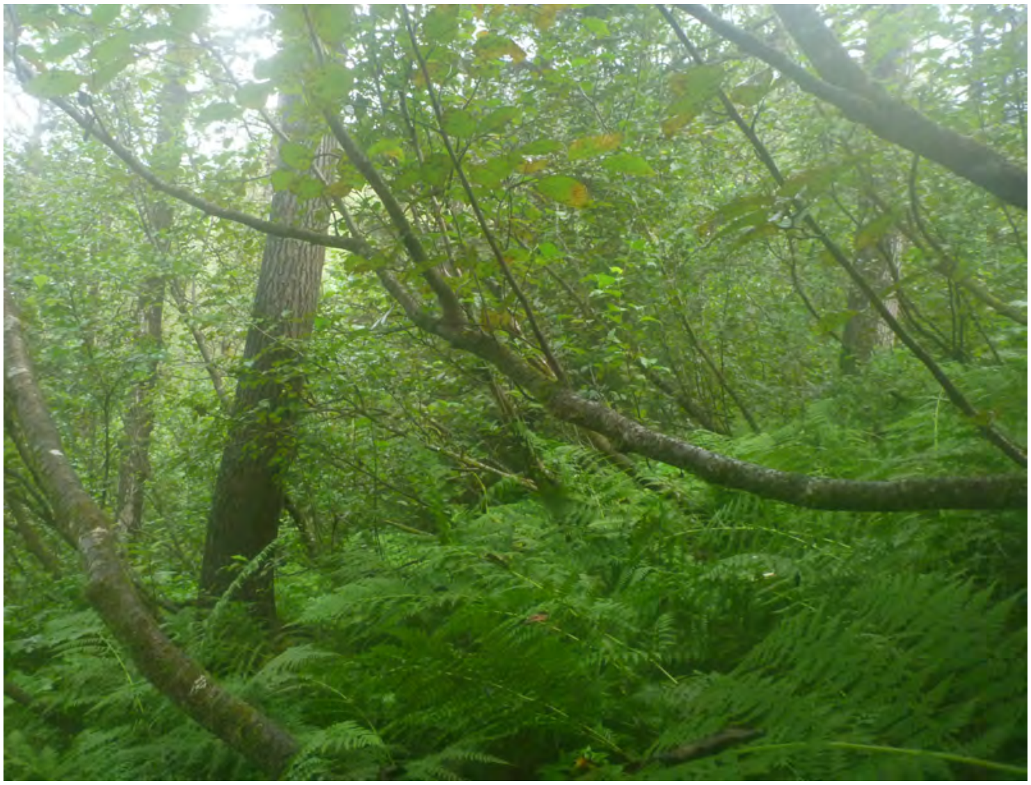

Figure 33.—Typical vegetation in map unit 20MT1.

Aspect range: Northeast to southwest (clockwise)
Slope range: 15 to 40 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 2

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile
Oi—0 to 2 centimeters; slightly decomposed plant material
A—2 to 24 centimeters; very gravelly loamy coarse sand
C—24 to 150 centimeters; very gravelly loamy coarse sand

Characteristics of the Kadachan Soil

Setting
Landform: Drainageways on mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear, convex
Across-slope shape: Concave, convex
Aspect, representative: West
Aspect range: South to north (clockwise)
Slope range: 15 to 45 percent
Parent material: Alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 60 to 70 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 0.9 centimeter)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Scrub Gravelly Drainageways Steep (R220XY444AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Oxyaquic Cryofluvents

Typical Profile
C1—0 to 11 centimeters; fine sand
C2—11 to 18 centimeters; very stony fine sand
C3—18 to 150 centimeters; extremely bouldery fine sand

Description of Rubble Land

Rubble land consists of areas of cobbles, flagstones, stones, and boulders in unstable deposits of sufficient thickness to significantly limit the establishment of vegetation. It is commonly at the base of mountains. In some areas, however, it consists of deposits of large rock fragments left on mountain slopes by glaciation or by periglacial processes.

Minor Components

Seclusion soils
Percent of map unit: 10 percent
Slope: 20 to 55 percent
Landform: Escarpments
Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)
Hydric soil status: No

20MT2—Escures-Polkapenn-Nunatak complex, 45 to 95 percent slopes

Map Unit Setting

Landscape: Mountains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 20.0 to 350 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Escures and similar soils: 25 percent
Polkapenn and similar soils: 25 percent
Nunatak and similar soils: 20 percent
Dissimilar minor components: 30 percent

Characteristics of the Escures Soil

Setting
Landform: Escarpments
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear

Aspect, representative: North
Aspect range: West to east (clockwise)
Slope range: 60 to 80 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 10 centimeters; gravelly coarse sandy loam
C1—10 to 25 centimeters; very gravelly coarse sandy loam
C2—25 to 54 centimeters; very gravelly coarse sandy loam
2R—54 to 200 centimeters; bedrock

Characteristics of the Polkapenn Soil

Setting
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 55 to 95 percent
Parent material: Till over residuum

Properties and Qualities
Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained

Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.9 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Plains (F220XY440AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents

Typical Profile
Oi—0 to 10 centimeters; slightly decomposed plant material
A—10 to 22 centimeters; extremely cobbly coarse sandy loam
C—22 to 42 centimeters; very cobbly coarse sandy loam
2R—42 to 200 centimeters; bedrock

Characteristics of the Nunatak Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect, representative: West
Aspect range: South to north (clockwise)
Slope range: 45 to 70 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 100 to 150 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive Typic Haplocryepts

Typical Profile
Oe—0 to 3 centimeters; moderately decomposed plant material
A—3 to 10 centimeters; gravelly sandy loam
Bw—10 to 36 centimeters; very gravelly coarse sandy loam
C—36 to 113 centimeters; very gravelly coarse sandy loam
2R—113 to 200 centimeters; bedrock

Minor Components

Bearisland soils
Percent of map unit: 10 percent
Slope: 30 to 55 percent
Landform: Moraines in mountain valleys
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No

Kadachan soils
Percent of map unit: 10 percent
Slope: 30 to 60 percent
Landform: Drainageways on mountain slopes
Ecological site: Maritime Scrub Gravelly Drainageways Steep (R220XY444AK)
Hydric soil status: No

Rock outcrop
Percent of map unit: 5 percent
Slope: 55 to 90 percent

Rubble land
Percent of map unit: 5 percent
Slope: 30 to 80 percent

20MT3—Polkapenn-Bearisland-Enigma complex, 40 to 100 percent slopes

Map Unit Setting

Landscape: Glaciated hills (figs. 34 and 35)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 20.0 to 350 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Polkapenn and similar soils: 30 percent
Bearisland and similar soils: 25 percent
Enigma and similar soils: 20 percent
Dissimilar minor components: 25 percent

Characteristics of the Polkapenn Soil

Setting
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 45 to 95 percent
Parent material: Till over residuum

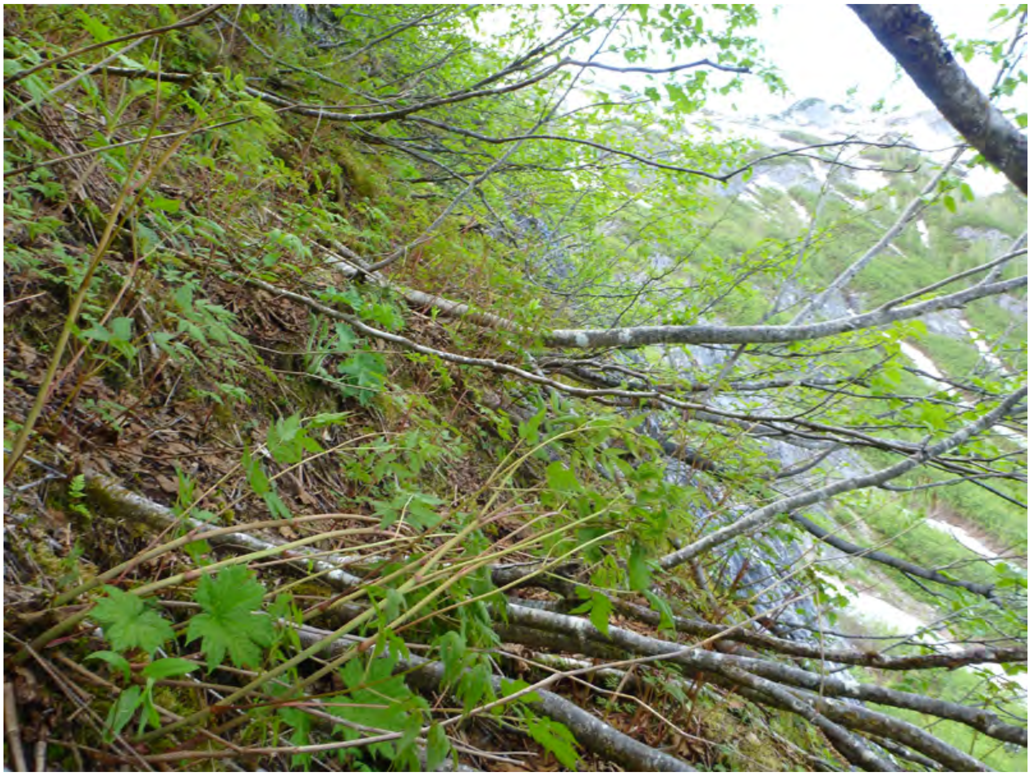

Figure 34.—Typical vegetation in map unit 20MT3.

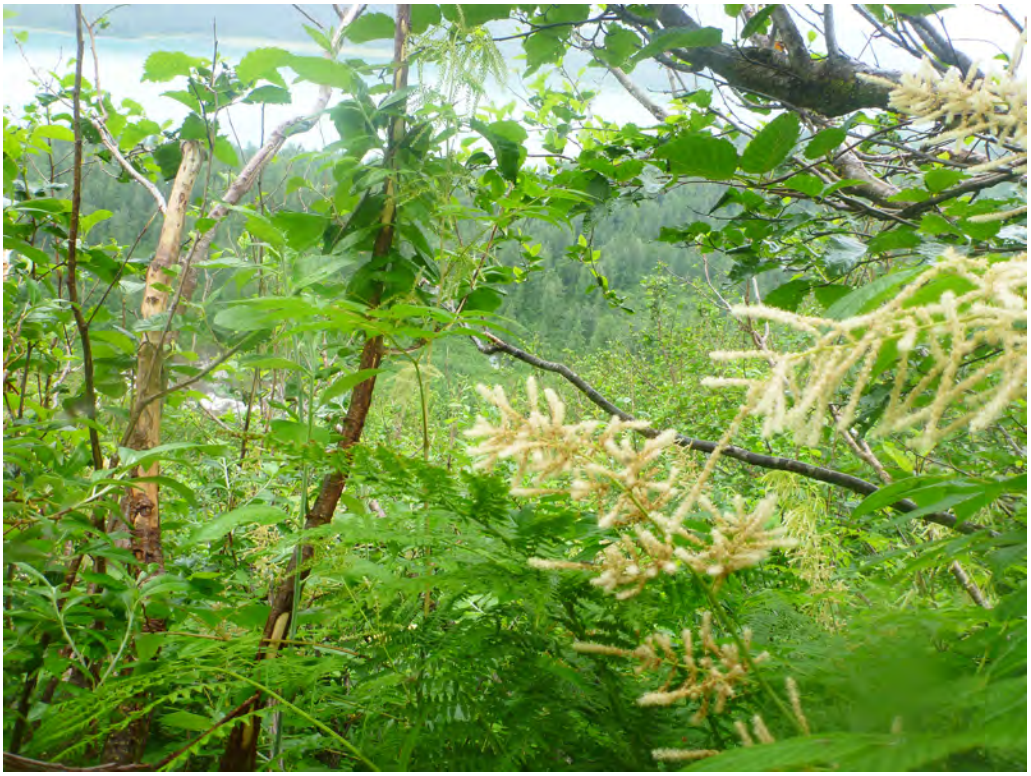

Figure 35.—Typical vegetation in map unit 20MT3.

Properties and Qualities
Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.9 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Plains (F220XY440AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents

Typical Profile
Oi—0 to 10 centimeters; slightly decomposed plant material
A—10 to 22 centimeters; extremely cobbly coarse sandy loam
C—22 to 42 centimeters; very cobbly coarse sandy loam
2R—42 to 200 centimeters; bedrock

Characteristics of the Bearisland Soil

Setting
Landform: Moraines in mountain valleys
Landform position (three-dimensional): Lower third of mountainflank and center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: Southeast
Aspect range: Northeast to southwest (clockwise)
Slope range: 40 to 75 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 2

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e

Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile

Oi—0 to 2 centimeters; slightly decomposed plant material
A—2 to 24 centimeters; very gravelly loamy coarse sand
C—24 to 150 centimeters; very gravelly loamy coarse sand

Characteristics of the Enigma Soil

Setting

Landform: Avalanche chutes on mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Concave, linear
Aspect, representative: Southeast
Aspect range: Northeast to northwest (clockwise)
Slope range: 50 to 100 percent
Parent material: Colluvium over residuum

Properties and Qualities

Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 4

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 1.7 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Scrub Loamy Slopes Steep (R220XY443AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Loamy-skeletal, mixed, superactive, nonacid Typic Cryorthents

Typical Profile

A—0 to 10 centimeters; very cobbly sandy loam
C—10 to 62 centimeters; extremely stony coarse sandy loam
2R—62 to 200 centimeters; bedrock

Minor Components

Rock outcrop

Percent of map unit: 10 percent
Slope: 40 to 85 percent

Seclusion soils

Percent of map unit: 10 percent
Slope: 50 to 80 percent
Landform: Escarpments

Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)
Hydric soil status: No

Rubble land
Percent of map unit: 5 percent
Slope: 25 to 55 percent

20MT4—Seclusion-Rock outcrop complex, 45 to 100 percent slopes

Map Unit Setting

Landscape: Mountains (fig. 36)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 20.0 to 350 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Seclusion and similar soils: 65 percent
Rock outcrop: 25 percent
Dissimilar minor components: 10 percent

Characteristics of the Seclusion Soil

Setting
Landform: Escarpments
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect, representative: Southeast
Aspect range: Northeast to northwest (clockwise)
Slope range: 45 to 100 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)

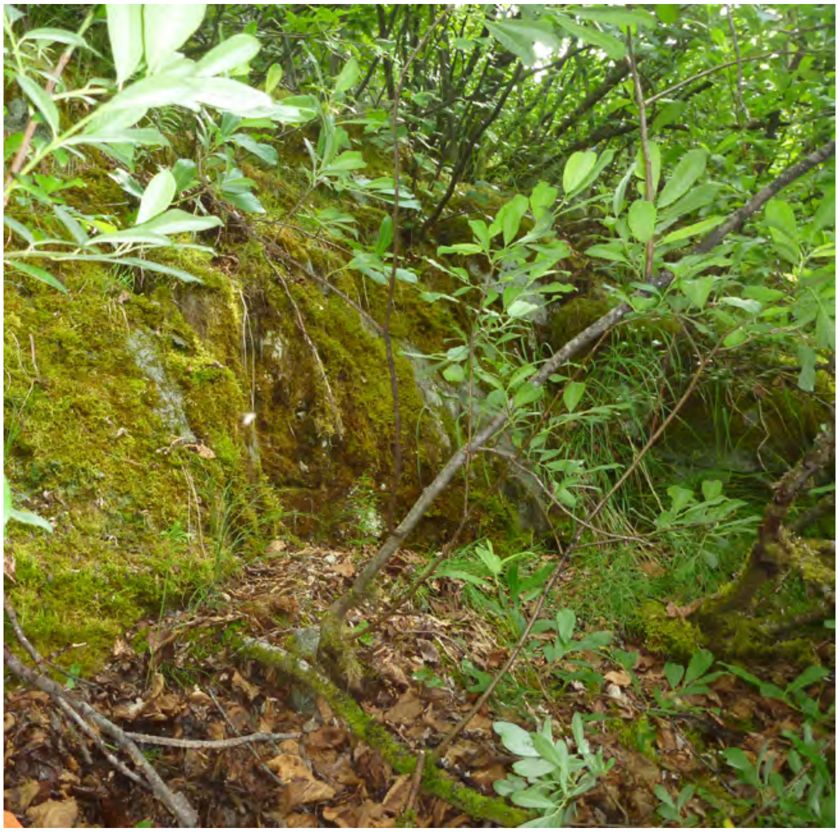

Figure 36.—Typical vegetation in map unit 20MT4.

Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Lithic Cryorthents

Typical Profile
Oe—0 to 9 centimeters; moderately decomposed plant material
AC—9 to 15 centimeters; very gravelly sandy loam
C—15 to 40 centimeters; very gravelly sandy loam
2R—40 to 200 centimeters; bedrock

Description of Rock Outcrop

Rock outcrop consists of exposures of barren bedrock, other than lava flows, chutes, and rock-lined pits. Some areas are large and only broken by small areas of soil. Most rock outcrops are hard rock, but some are soft rock such as thin beds of weakly cemented shale interbedded with thick beds of strongly cemented sandstone.

Minor Components

Skarn soils
Percent of map unit: 10 percent
Slope: 35 to 60 percent
Landform: Mountain slopes
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No

20MT5—Rock outcrop-Seclusion-Skarn complex, 30 to 90 percent slopes

Map Unit Setting

Landscape: Mountains (fig. 37)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 350 meters
Mean annual precipitation: 850 to 1,900 millimeters
Mean annual air temperature: 0 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 35 percent
Seclusion and similar soils: 25 percent
Skarn and similar soils: 20 percent
Dissimilar minor components: 20 percent

Description of Rock Outcrop

Rock outcrop consists of exposures of barren bedrock, other than lava flows, chutes, and rock-lined pits. Some areas are large and only broken by small areas of soil. Most rock outcrops are hard rock, but some are soft rock such as thin beds of weakly cemented shale interbedded with thick beds of strongly cemented sandstone.

Characteristics of the Seclusion Soil

Setting
Landform: Escarpments
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect, representative: Southeast
Aspect range: Northeast to northwest (clockwise)
Slope range: 50 to 90 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: *Not sodic*
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)
Hydric soil status: No

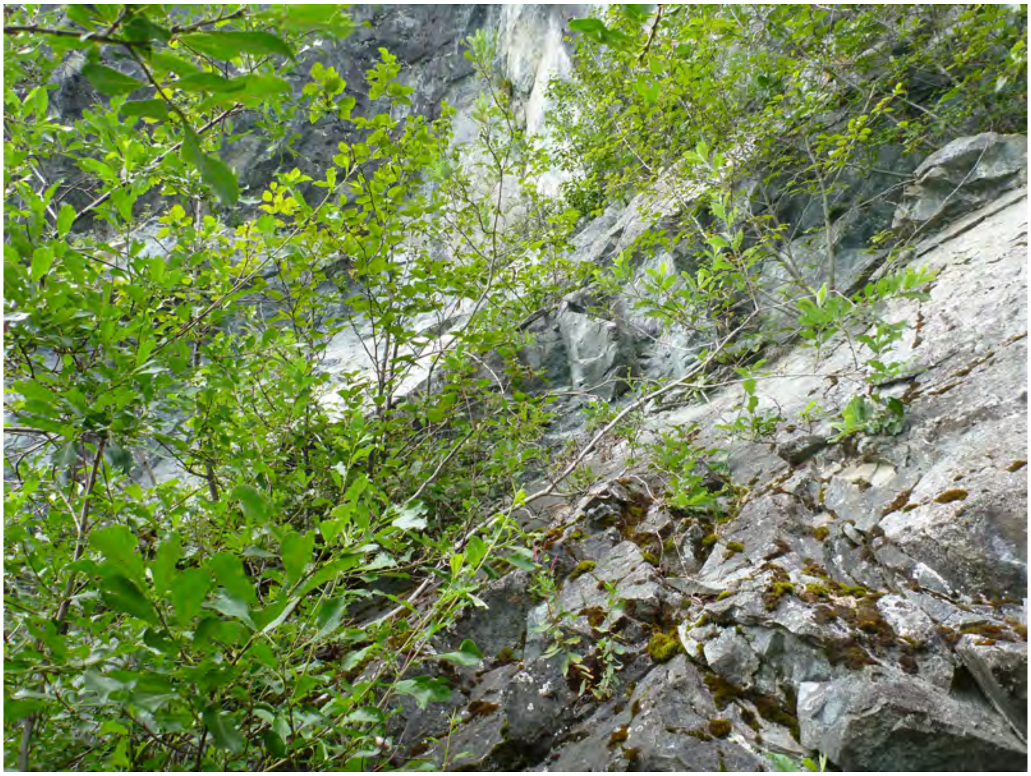

Figure 37.—Typical vegetation in map unit 20MT5.

Hydrologic soil group: D
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Lithic Cryorthents

Typical Profile
Oe—0 to 9 centimeters; moderately decomposed plant material
AC—9 to 15 centimeters; very gravelly sandy loam
C—15 to 40 centimeters; very gravelly sandy loam
2R—40 to 200 centimeters; bedrock

Characteristics of the Skarn Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect, representative: Southeast
Aspect range: Northeast to southwest (clockwise)
Slope range: 30 to 60 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 100 to 150 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.6 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 9.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents

Typical Profile
Oe—0 to 8 centimeters; moderately decomposed plant material
A—8 to 14 centimeters; gravelly sandy loam
C1—14 to 60 centimeters; very gravelly sandy clay loam
C2—60 to 104 centimeters; very gravelly sandy clay loam
2R—104 to 200 centimeters; bedrock

Minor Components

Kadachan soils
Percent of map unit: 10 percent
Slope: 25 to 55 percent
Landform: Drainageways on mountain slopes
Ecological site: Maritime Scrub Gravelly Drainageways Steep (R220XY444AK)
Hydric soil status: No

Muirpoint soils
Percent of map unit: 10 percent
Slope: 10 to 25 percent
Landform: Valley trains
Ecological site: Maritime Forest Sandy Plain Alluvial Fan (F220XY430AK)
Hydric soil status: No

20MT6—Bergbay-Boussole-Toyatte complex, 25 to 90 percent slopes

Map Unit Setting

Landscape: Mountains (fig. 38)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 10.0 to 250 meters
Mean annual precipitation: 850 to 3,860 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Bergbay and similar soils: 30 percent
Boussole and similar soils: 25 percent
Toyatte and similar soils: 20 percent
Dissimilar minor components: 25 percent

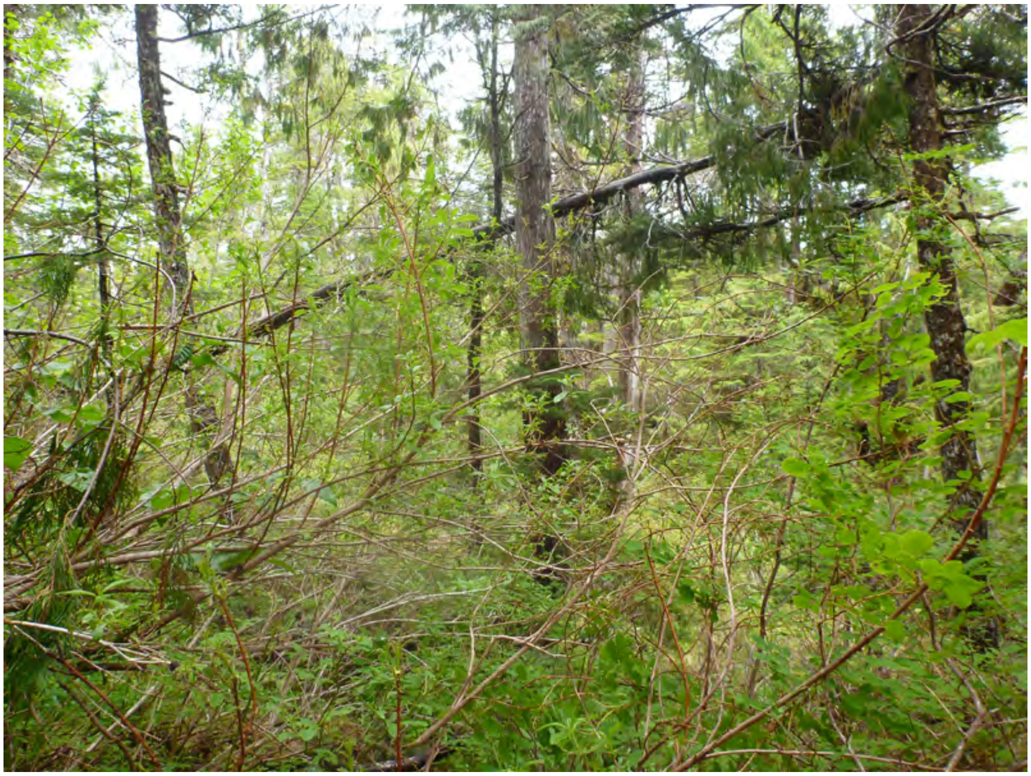

Figure 38.—Typical vegetation in map unit 20MT6.

Characteristics of the Bergbay Soil

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 40 to 90 percent
Parent material: Colluvium over residuum weathered from granite

Properties and Qualities

Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 6.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Gravelly Slopes (F220XY441AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive Typic Humicryepts

Typical Profile
Oe—0 to 8 centimeters; moderately decomposed plant material
A—8 to 37 centimeters; stony sandy loam
C—37 to 70 centimeters; extremely stony coarse sandy loam
2R—70 to 200 centimeters; bedrock

Characteristics of the Boussole Soil

Setting
Landform: Mountain valleys
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Concave
Aspect, representative: Northeast
Aspect range: Northwest to southeast (clockwise)
Slope range: 30 to 60 percent
Parent material: Organic material over colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.5 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Somewhat poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 35 to 45 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 15.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes Steep (F220XY442AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy, mixed, superactive Lithic Humicryepts

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
Oa—10 to 28 centimeters; highly decomposed plant material
A1—28 to 41 centimeters; silt loam
A2—41 to 51 centimeters; gravelly sandy loam
2R—51 to 200 centimeters; bedrock

Characteristics of the Toyatte Soil

Setting
Landform: Muskegs on mountain slopes
Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Convex
Across-slope shape: Convex
Aspect, representative: South
Aspect range: East to west (clockwise)
Slope range: 25 to 50 percent
Parent material: Organic material over till over residuum

Properties and Qualities
Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.6 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Somewhat poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 25 to 35 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 13.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Woodland Peat Slopes (F220XY439AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Dysic Lithic Cryofolists

Typical Profile
Oe—0 to 16 centimeters; moderately decomposed plant material
Oa—16 to 32 centimeters; highly decomposed plant material
Bw—32 to 42 centimeters; silt loam
2R—42 to 200 centimeters; bedrock

Minor Components

Fingers soils
Percent of map unit: 10 percent
Slope: 30 to 60 percent
Landform: Drainageways on glaciated plains
Ecological site: Maritime Shrub Gravelly Drainageway (R220XY425AK)
Hydric soil status: No

Kashoto soils
Percent of map unit: 10 percent
Slope: 0 to 8 percent
Landform: Muskegs on glaciated plains
Ecological site: Maritime Woodland Peat Plain Depression (F220XY434AK)
Hydric soil status: Yes

Abdallah soils
Percent of map unit: 5 percent
Slope: 40 to 90 percent
Landform: Avalanche chutes on mountain slopes
Ecological site: Maritime Scrub Loamy Slopes Steep (R220XY443AK)
Hydric soil status: No

20MT7—Foad-Abdallah-Justicecreek complex, 35 to 85 percent slopes

Map Unit Setting

Landscape: Hills (fig. 39)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 250 meters
Mean annual precipitation: 1,780 to 3,312 millimeters
Mean annual air temperature: 2 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Foad and similar soils: 35 percent
Abdallah and similar soils: 25 percent
Justicecreek and similar soils: 20 percent
Dissimilar minor components: 20 percent

Characteristics of the Foad Soil

Setting
Landform: Glaciated hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave
Aspect, representative: Southeast
Aspect range: Northeast to northwest (clockwise)
Slope range: 45 to 85 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 13.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Gravelly Slopes (F220XY441AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Loamy-skeletal, mixed, superactive Typic Humicryods

Typical Profile
Oe—0 to 5 centimeters; moderately decomposed plant material

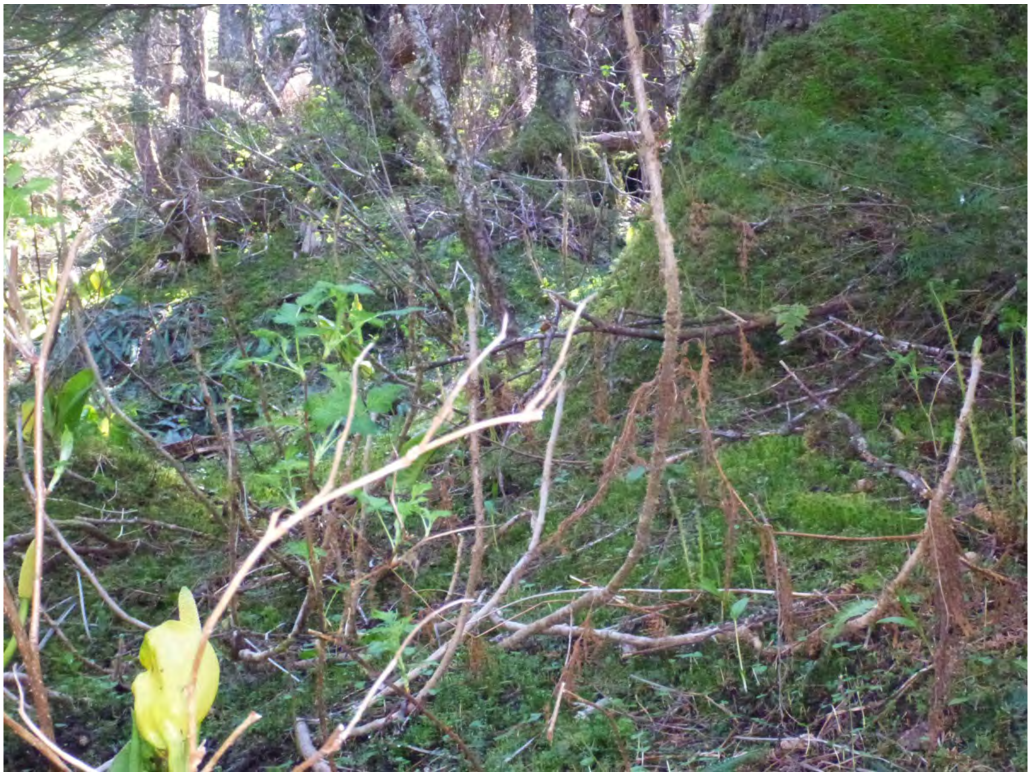

Figure 39.—Typical vegetation in map unit 20MT7.

Oa—5 to 10 centimeters; highly decomposed plant material
EA—10 to 15 centimeters; very cobbly silt loam
Bhs—15 to 84 centimeters; very cobbly silt loam
2R—84 to 200 centimeters; bedrock

Characteristics of the Abdallah Soil

Setting

Landform: Avalanche chutes on mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Concave, linear
Aspect, representative: Northeast
Aspect range: Northwest to southeast (clockwise)
Slope range: 40 to 65 percent
Parent material: Gravelly colluvium

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None

Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Scrub Loamy Slopes Steep (R220XY443AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive, acid Typic Cryorthents

Typical Profile
Oi—0 to 3 centimeters; cobbly slightly decomposed plant material
A—3 to 20 centimeters; extremely cobbly sandy loam
C—20 to 150 centimeters; extremely cobbly sandy loam

Characteristics of the Justicecreek Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 35 to 75 percent
Parent material: Organic material over residuum

Properties and Qualities
Depth to restrictive feature: 0 to 25 centimeters to lithic bedrock
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 9.9 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Forest Loamy Plains (F220XY440AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Dysic Lithic Cryofolists

Typical Profile
Oa1—0 to 11 centimeters; highly decomposed plant material
Oa2—11 to 22 centimeters; highly decomposed plant material
2R—22 to 200 centimeters; bedrock

Minor Components

Kutskloh soils
Percent of map unit: 10 percent
Slope: 15 to 35 percent

Landform: Mountain slopes
Ecological site: Maritime Forest Loamy Organic Slopes (F220XY447AK)
Hydric soil status: No

Rubble land
Percent of map unit: 10 percent
Slope: 15 to 30 percent

20MTC—Skarn-Polkapenn-Kadachan complex, 25 to 90 percent slopes

Map Unit Setting

Landscape: Mountains (figs. 40 and 41)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 20.0 to 350 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Skarn and similar soils: 35 percent
Polkapenn and similar soils: 25 percent
Kadachan and similar soils: 20 percent
Dissimilar minor components: 20 percent

Characteristics of the Skarn Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect, representative: Southeast
Aspect range: Northeast to southwest (clockwise)
Slope range: 30 to 60 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 100 to 150 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.6 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 9.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e

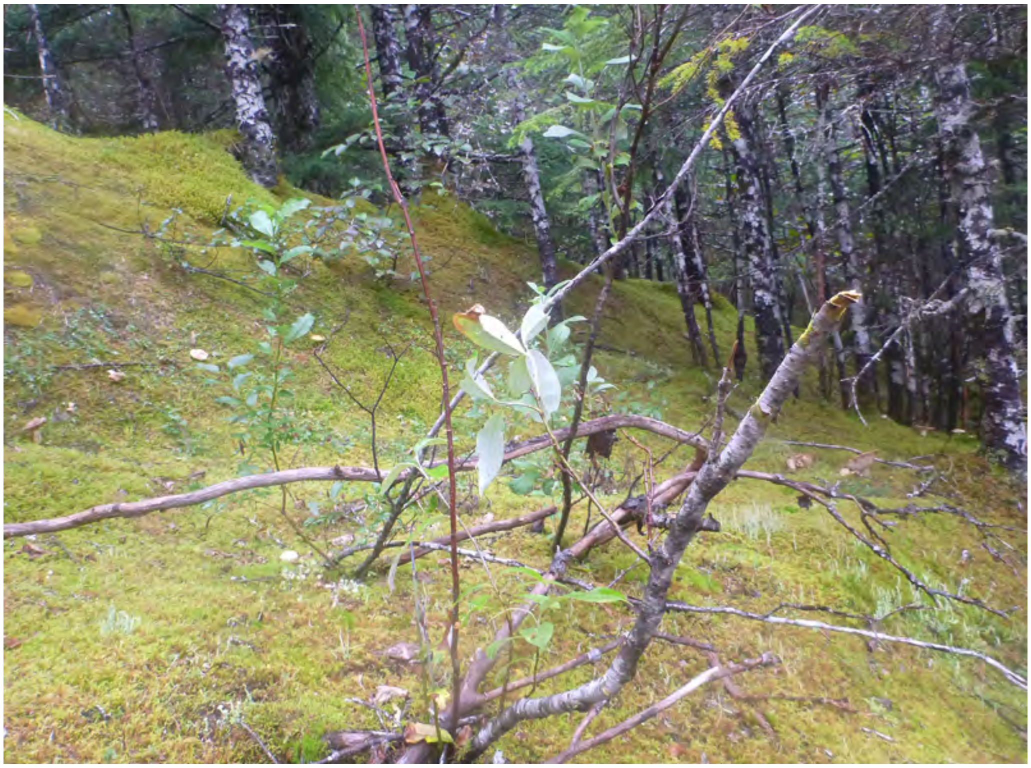

Figure 40.—Typical vegetation in map unit 20MTC.

Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents

Typical Profile
Oe—0 to 8 centimeters; moderately decomposed plant material
A—8 to 14 centimeters; gravelly sandy loam
C1—14 to 60 centimeters; very gravelly sandy clay loam
C2—60 to 104 centimeters; very gravelly sandy clay loam
2R—104 to 200 centimeters; bedrock

Characteristics of the Polkapenn Soil

Setting
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 35 to 90 percent
Parent material: Till over residuum

Properties and Qualities
Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline

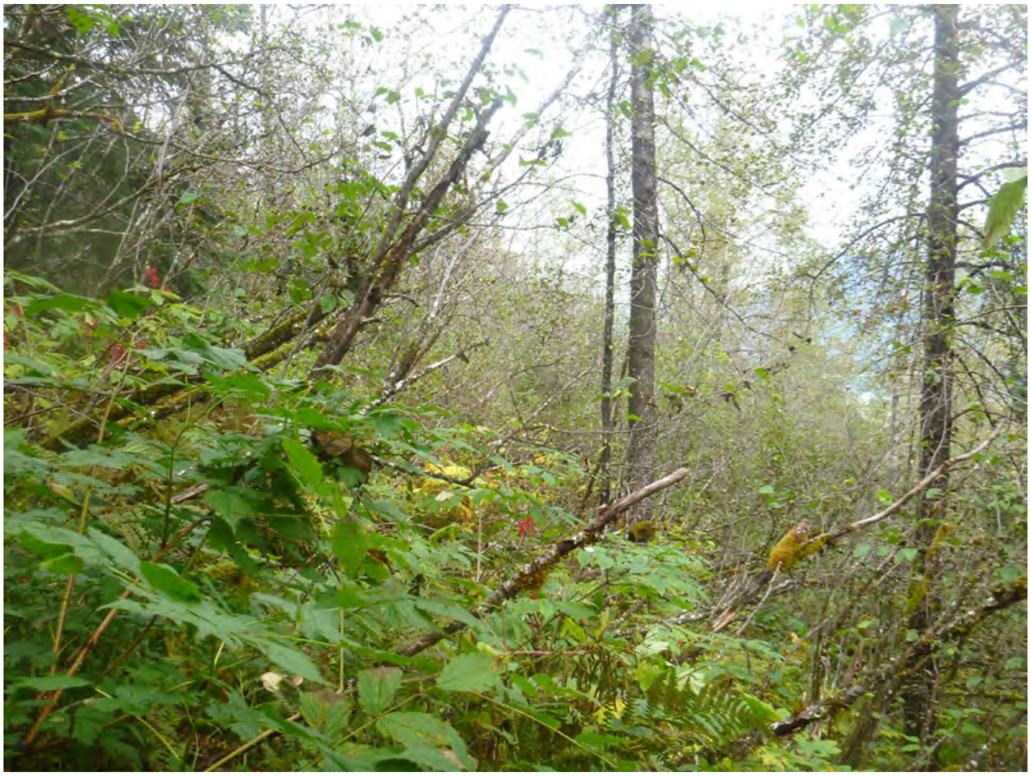

Figure 41.—Typical vegetation in map unit 20MTC.

Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.9 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Plains (F220XY440AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents

Typical Profile

Oi—0 to 10 centimeters; slightly decomposed plant material
A—10 to 22 centimeters; extremely cobbly coarse sandy loam
C—22 to 42 centimeters; very cobbly coarse sandy loam
2R—42 to 200 centimeters; bedrock

Characteristics of the Kadachan Soil

Setting

Landform: Drainageways on mountain slopes
Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear, convex
Across-slope shape: Concave, convex
Aspect, representative: West
Aspect range: South to north (clockwise)
Slope range: 25 to 50 percent
Parent material: Alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 60 to 70 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 0.9 centimeter)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Scrub Gravelly Drainageways Steep (R220XY444AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Oxyaquic Cryofluvents

Typical Profile
C1—0 to 11 centimeters; fine sand
C2—11 to 18 centimeters; very stony fine sand
C3—18 to 150 centimeters; extremely bouldery fine sand

Minor Components

Enigma soils
Percent of map unit: 10 percent
Slope: 15 to 90 percent
Landform: Avalanche chutes on mountain slopes
Ecological site: Maritime Scrub Loamy Slopes Steep (R220XY443AK)
Hydric soil status: No

Rock outcrop
Percent of map unit: 10 percent
Slope: 35 to 90 percent

20MTE—Wachusett-Maquinna-Boussole complex, 10 to 60 percent slopes

Map Unit Setting

Landscape: Mountains (figs. 42 and 43)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 10.0 to 250 meters
Mean annual precipitation: 850 to 3,312 millimeters
Mean annual air temperature: 1 to 7 degrees C

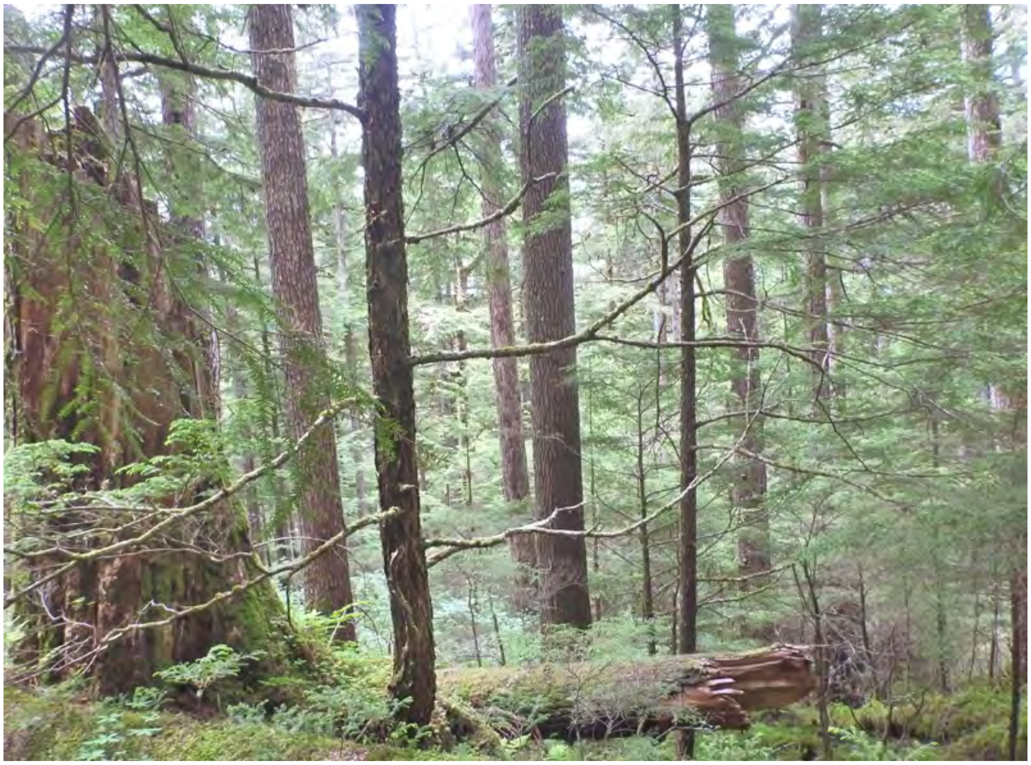

Figure 42.—Typical vegetation in map unit 20MTE.

Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Wachusett and similar soils: 40 percent
Maquinna and similar soils: 30 percent
Boussole and similar soils: 20 percent
Dissimilar minor components: 10 percent

Characteristics of the Wachusett Soil

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: South
Aspect range: East to west (clockwise)
Slope range: 20 to 60 percent
Parent material: Organic material over till over residuum

Properties and Qualities

Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 55 to 65 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 19.2 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes Steep (F220XY442AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Coarse-loamy, mixed, superactive Folistic Humicryods

Typical Profile

Oe—0 to 23 centimeters; moderately decomposed plant material
Oa—23 to 34 centimeters; highly decomposed plant material
E—34 to 41 centimeters; silt loam

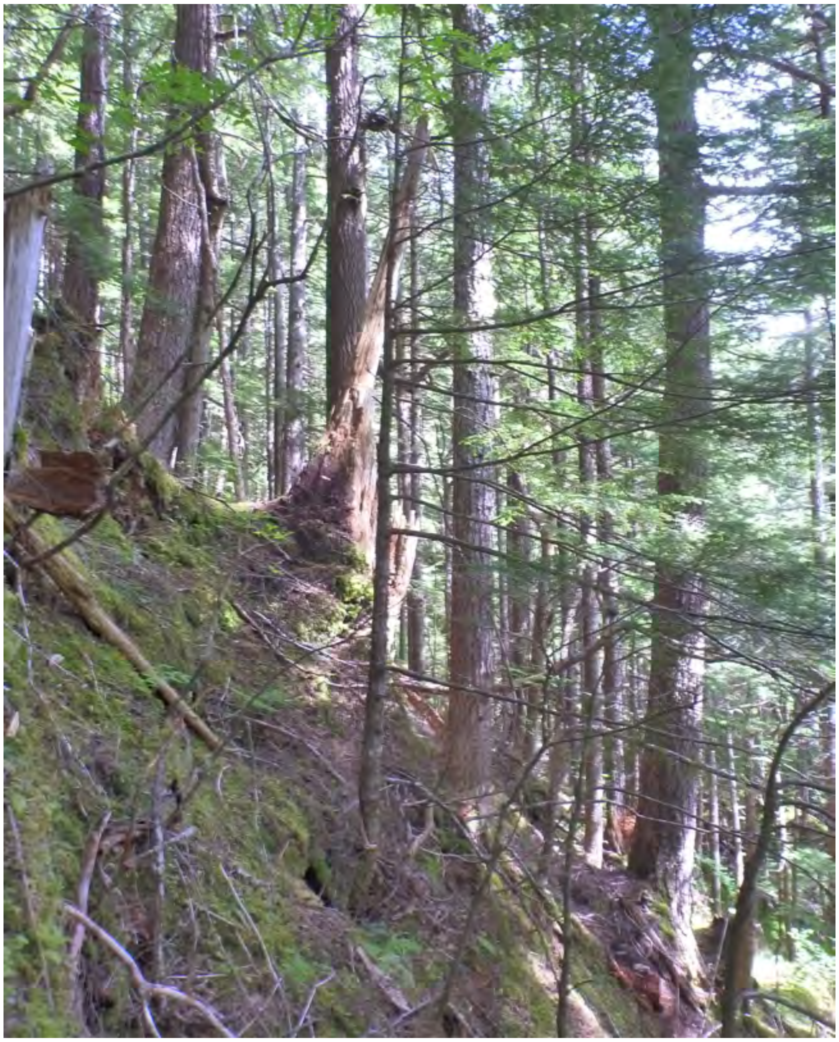

Figure 43.—Typical vegetation in map unit 20MTE.

Bhs—41 to 60 centimeters; channery silt loam
BC—60 to 80 centimeters; channery loam
Cg—80 to 85 centimeters; channery sandy loam
2R—85 to 200 centimeters; bedrock

Characteristics of the Maquinna Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect, representative: Southwest
Aspect range: Southeast to northwest (clockwise)
Slope range: 15 to 50 percent
Parent material: Organic material over colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 100 to 150 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Moderate (about 19.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Gravelly Slopes (F220XY441AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Coarse-loamy, mixed, superactive Typic Humicryepts

Typical Profile
Oi—0 to 10 centimeters; slightly decomposed plant material
Oe—10 to 33 centimeters; moderately decomposed plant material
A—33 to 75 centimeters; gravelly silt loam
C—75 to 107 centimeters; very gravelly silt loam
2R—107 to 200 centimeters; bedrock

Characteristics of the Boussole Soil

Setting
Landform: Mountain valleys
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Concave
Aspect, representative: Northeast
Aspect range: Northwest to southeast (clockwise)
Slope range: 10 to 40 percent
Parent material: Organic material over colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.5 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Somewhat poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 35 to 45 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 15.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes Steep (F220XY442AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy, mixed, superactive Lithic Humicryepts

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
Oa—10 to 28 centimeters; highly decomposed plant material
A1—28 to 41 centimeters; silt loam
A2—41 to 51 centimeters; gravelly sandy loam
2R—51 to 200 centimeters; bedrock

Minor Components

Fingers soils
Percent of map unit: 10 percent
Slope: 5 to 30 percent
Landform: Drainageways on glaciated plains
Ecological site: Maritime Shrub Gravelly Drainageway (R220XY425AK)
Hydric soil status: No

20MTF—Wachusett-Maquinna-Enigma complex, 25 to 90 percent slopes

Map Unit Setting

Landscape: Mountains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 10.0 to 350 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Wachusett and similar soils: 35 percent
Maquinna and similar soils: 25 percent
Enigma and similar soils: 20 percent
Dissimilar minor components: 20 percent

Characteristics of the Wachusett Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: South
Aspect range: East to west (clockwise)
Slope range: 30 to 80 percent
Parent material: Organic material over till over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 55 to 65 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 19.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes Steep (F220XY442AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Coarse-loamy, mixed, superactive Folistic Humicryods

Typical Profile
Oe—0 to 23 centimeters; moderately decomposed plant material
Oa—23 to 34 centimeters; highly decomposed plant material
E—34 to 41 centimeters; silt loam
Bhs—41 to 60 centimeters; channery silt loam
BC—60 to 80 centimeters; channery loam
Cg—80 to 85 centimeters; channery sandy loam
2R—85 to 200 centimeters; bedrock

Characteristics of the Maquinna Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Aspect, representative: Southwest
Aspect range: Southeast to northwest (clockwise)
Slope range: 25 to 70 percent
Parent material: Organic material over colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 100 to 150 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.0 LEP)

Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Moderate (about 19.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Gravelly Slopes (F220XY441AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Coarse-loamy, mixed, superactive Typic Humicryepts

Typical Profile
Oi—0 to 10 centimeters; slightly decomposed plant material
Oe—10 to 33 centimeters; moderately decomposed plant material
A—33 to 75 centimeters; gravelly silt loam
C—75 to 107 centimeters; very gravelly silt loam
2R—107 to 200 centimeters; bedrock

Characteristics of the Enigma Soil

Setting
Landform: Avalanche chutes on mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Concave, linear
Aspect, representative: Southeast
Aspect range: Northeast to northwest (clockwise)
Slope range: 40 to 90 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 4

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 1.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Scrub Loamy Slopes Steep (R220XY443AK)
Hydric soil status: No

Hydrologic soil group: B
Soil classification: Loamy-skeletal, mixed, superactive, nonacid Typic Cryorthents

Typical Profile
A—0 to 10 centimeters; very cobbly sandy loam
C—10 to 62 centimeters; extremely stony coarse sandy loam
2R—62 to 200 centimeters; bedrock

Minor Components

Escures soils
Percent of map unit: 10 percent
Slope: 35 to 90 percent
Landform: Escarpments
Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)
Hydric soil status: No

Fingers soils
Percent of map unit: 10 percent
Slope: 10 to 40 percent
Landform: Drainageways on glaciated plains
Ecological site: Maritime Shrub Gravelly Drainageway (R220XY425AK)
Hydric soil status: No

20OC1—Scidmore-Perouse, frequently ponded complex, 0 to 3 percent slopes

Map Unit Setting

Landscape: Mountain valleys (fig. 44)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 1.0 to 40 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Scidmore and similar soils: 55 percent
Perouse, frequently ponded, and similar soils: 35 percent
Dissimilar minor components: 10 percent

Characteristics of the Scidmore Soil

Setting
Landform: Pitted outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline

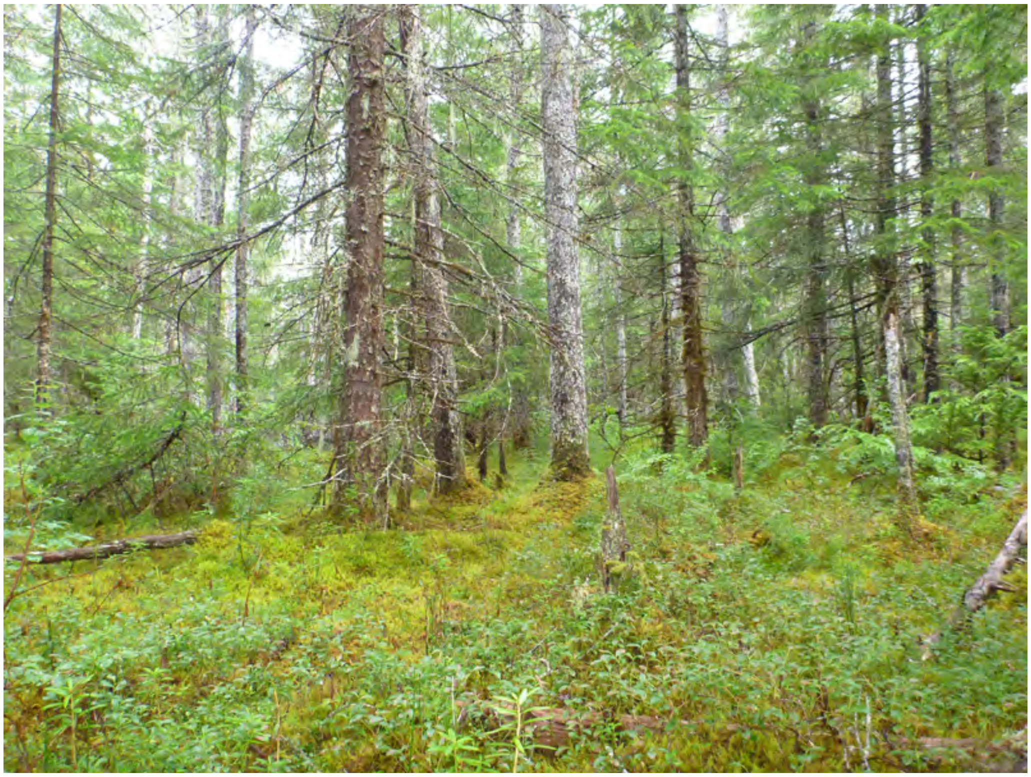

Figure 44.—Typical vegetation in map unit 20OC1.

Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 50 to 55 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 6.8 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Aquic Haplocryepts

Typical Profile

Oe—0 to 3 centimeters; moderately decomposed plant material
A—3 to 9 centimeters; sandy loam
Bw—9 to 31 centimeters; loamy sand
C—31 to 50 centimeters; sand
Cg—50 to 150 centimeters; coarse sand

Characteristics of the Perouse, Frequently Ponded, Soil

Setting

Landform: Outwash deltas

Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 1 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat
Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand
Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

Minor Components

Scidmore, drained, soils
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Pitted outwash plains
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

20OD1—Gustavus-Lamplugh complex, 0 to 30 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 45)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 45 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C

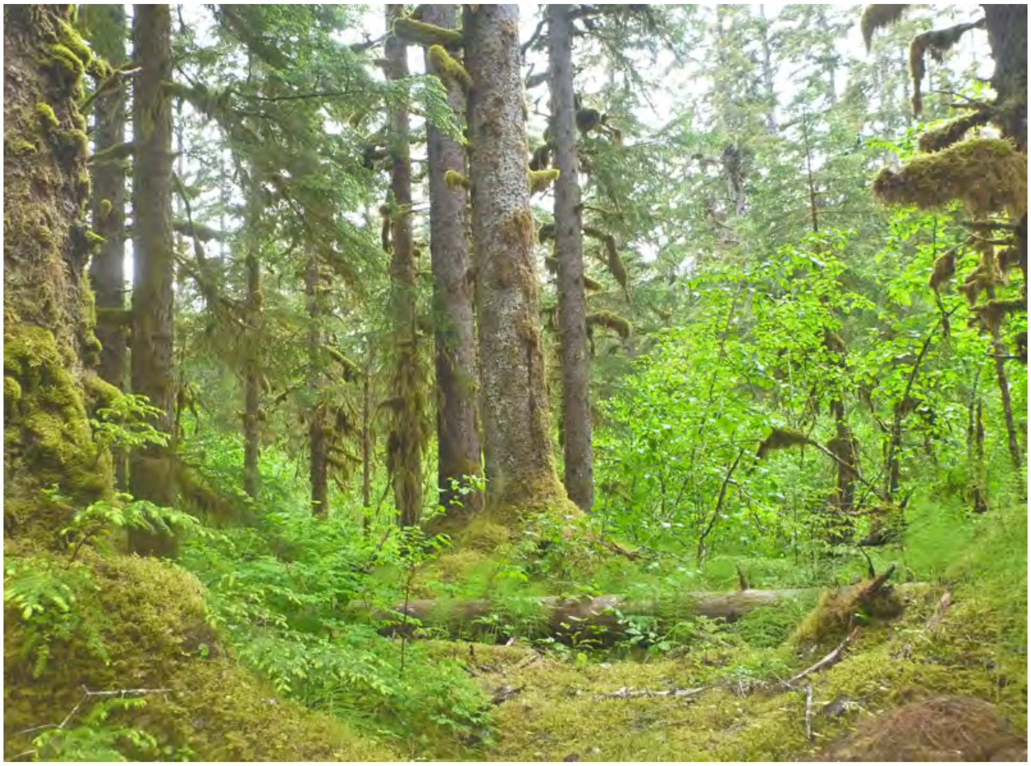

Figure 45.—Typical vegetation in map unit 20OD1.

Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Gustavus and similar soils: 45 percent
Lamplugh and similar soils: 45 percent
Dissimilar minor components: 10 percent

Characteristics of the Gustavus Soil

Setting

Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 5 to 30 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained

Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 11.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Haplocryepts

Typical Profile
Oe—0 to 12 centimeters; moderately decomposed plant material
Bw—12 to 33 centimeters; fine sandy loam
C1—33 to 68 centimeters; loamy sand
C2—68 to 140 centimeters; loamy sand
C3—140 to 150 centimeters; coarse sand

Characteristics of the Lamplugh Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 10 percent
Parent material: Organic material over outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Moderate (about 4.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: About 15 to 25 centimeters (see table 19)
Available water capacity (entire profile): High (about 25.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Loamy Plain Wet (F220XY435AK)
Hydric soil status: Yes
Hydrologic soil group: C/D
Soil classification: Fine-loamy, mixed, superactive, nonacid Typic Cryaquepts

Typical Profile
Oe—0 to 15 centimeters; moderately decomposed plant material
Oa—15 to 19 centimeters; highly decomposed plant material
E—19 to 21 centimeters; sandy loam
Bw1—21 to 35 centimeters; sandy loam
Bw2—35 to 54 centimeters; silty clay loam

Cg1—54 to 70 centimeters; very fine sandy loam
Cg2—70 to 150 centimeters; silty clay loam

Minor Components

Perouse soils
Percent of map unit: 10 percent
Slope: 0 to 3 percent
Landform: Outwash deltas
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes

20ODF—Glacierbay-Geikie complex, 0 to 15 percent slopes

Map Unit Setting

Note: This map unit occurs outside the park in the small community of Gustavus. A locator map is not provided in the Appendix.

Landscape: Outwash plains (fig. 46)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 45 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Glacierbay and similar soils: 50 percent
Geikie and similar soils: 30 percent
Dissimilar minor components: 20 percent

Characteristics of the Glacierbay Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Glaciolacustrine deposits

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 2.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 cm, perched (see table 19)
Available water capacity (entire profile): Low (about 14.9 centimeters)

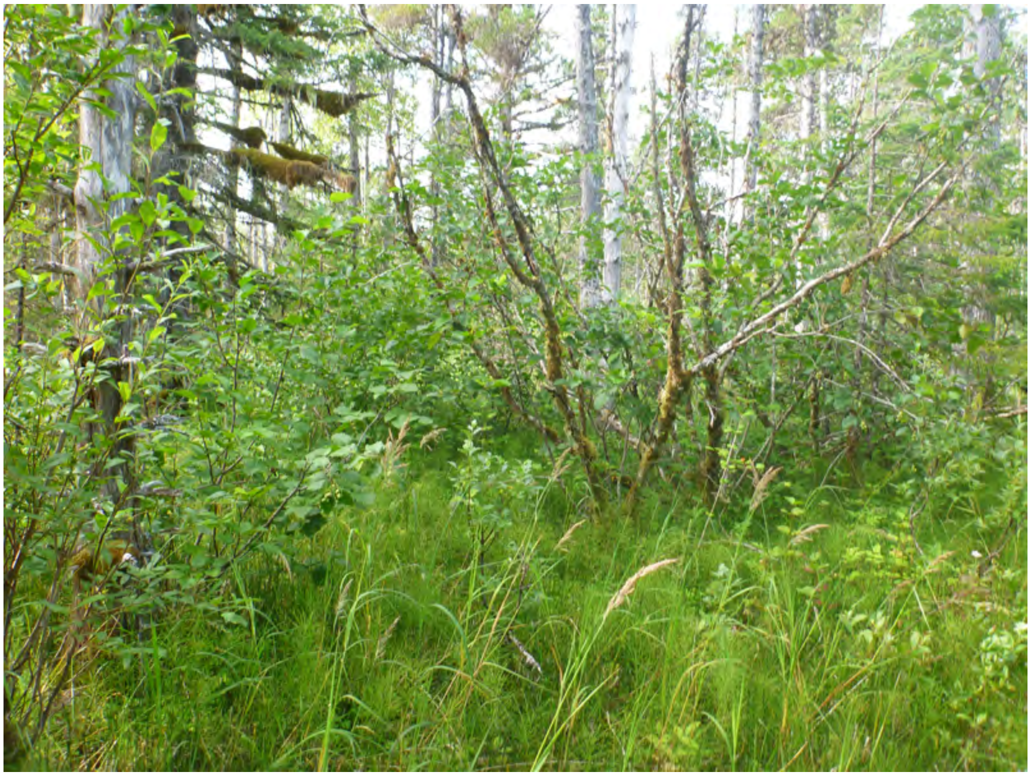

Figure 46.—Typical vegetation in map unit 20ODF.

Interpretive Groups

Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: C/D
Soil classification: Fine-silty over sandy or sandy-skeletal, mixed, superactive, calcareous Typic Cryaquents

Typical Profile

A—0 to 8 centimeters; silt loam
Cg1—8 to 25 centimeters; silt loam
Cg2—25 to 58 centimeters; silt loam
2Cg1—58 to 100 centimeters; sand
2Cg2—100 to 130 centimeters; fine sand
2Cg3—130 to 150 centimeters; sand

Characteristics of the Geikie Soil

Setting

Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 15 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 1.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 12.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Coarse-loamy over sandy or sandy-skeletal, mixed, superactive Typic Haplocryepts

Typical Profile
A—0 to 7 centimeters; loam
Bw—7 to 32 centimeters; loam
C—32 to 48 centimeters; silt loam
2C1—48 to 120 centimeters; sand
2C2—120 to 150 centimeters; gravelly sand

Minor Components

Excursion soils
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Outwash deltas
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes

Topsy soils
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Pitted outwash plains
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes

20OP1—Fossil-Tyeen-Vivid complex, 0 to 15 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 47)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 130 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C

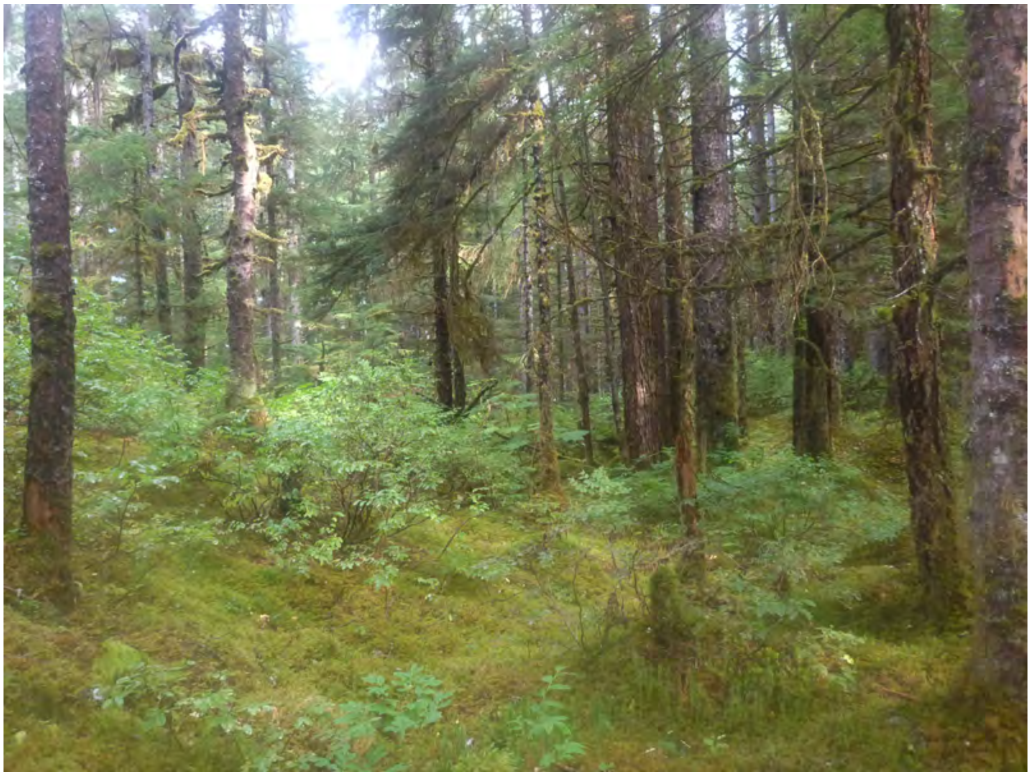

Figure 47.—Typical vegetation in map unit 20OP1.

Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Fossil and similar soils: 30 percent
Tyeen and similar soils: 25 percent
Vivid and similar soils: 20 percent
Dissimilar minor components: 25 percent

Characteristics of the Fossil Soil

Setting
Landform: Pitted outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 15 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 5.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Cryorthents

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
A—10 to 27 centimeters; medium gravelly coarse sand
C1—27 to 50 centimeters; very gravelly coarse sand
C2—50 to 95 centimeters; coarse sand
C3—95 to 150 centimeters; extremely gravelly coarse sand

Characteristics of the Tyeen Soil

Setting
Landform: Glacial-valley floors
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 0 to 15 percent
Parent material: Gravelly till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.9 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 8.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 12 centimeters; very gravelly sandy loam

C1—12 to 50 centimeters; very gravelly coarse sandy loam
C2—50 to 150 centimeters; very gravelly sandy loam

Characteristics of the Vivid Soil

Setting

Landform: Glacial-valley floors
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Lacustrine deposits over till

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.6 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Occasional (see table 19)
Seasonal water table (depth, kind): About 3 to 11 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 15.1 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Graminoid Loamy Plain Depression (R220XY436AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryaquents

Typical Profile

Oe—0 to 8 centimeters; moderately decomposed plant material
Cg1—8 to 28 centimeters; silt
2Cg2—28 to 150 centimeters; very cobbly sandy loam

Minor Components

Fingers soils

Percent of map unit: 10 percent
Slope: 0 to 20 percent
Landform: Drainageways on glaciated plains
Ecological site: Maritime Shrub Gravelly Drainageway (R220XY425AK)
Hydric soil status: No

Riverwash

Percent of map unit: 10 percent
Slope: 0 to 5 percent
Hydric soil status: Yes

Lituya soils

Percent of map unit: 5 percent
Slope: 0 to 3 percent

Landform: Fluviomarine terraces
Ecological site: Estuarine Herbacous Sandy Coastal Plain (R220XY422AK)
Hydric soil status: No

20OP4—Kashoto-Annoksek-Bulky complex, 0 to 10 percent slopes

Map Unit Setting

Landscape: Till plains (fig. 48)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 200 meters
Mean annual precipitation: 850 to 3,312 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Kashoto and similar soils: 50 percent
Annoksek and similar soils: 30 percent
Bulky and similar soils: 15 percent
Dissimilar minor components: 5 percent

Characteristics of the Kashoto Soil

Setting
Landform: Muskegs on glaciated plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Mossy organic material

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 10 to 22 centimeters, perched (see table 19)
Available water capacity (entire profile): Very high (about 67.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Woodland Peat Plain Depression (F220XY434AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Dysic Typic Cryosaprists

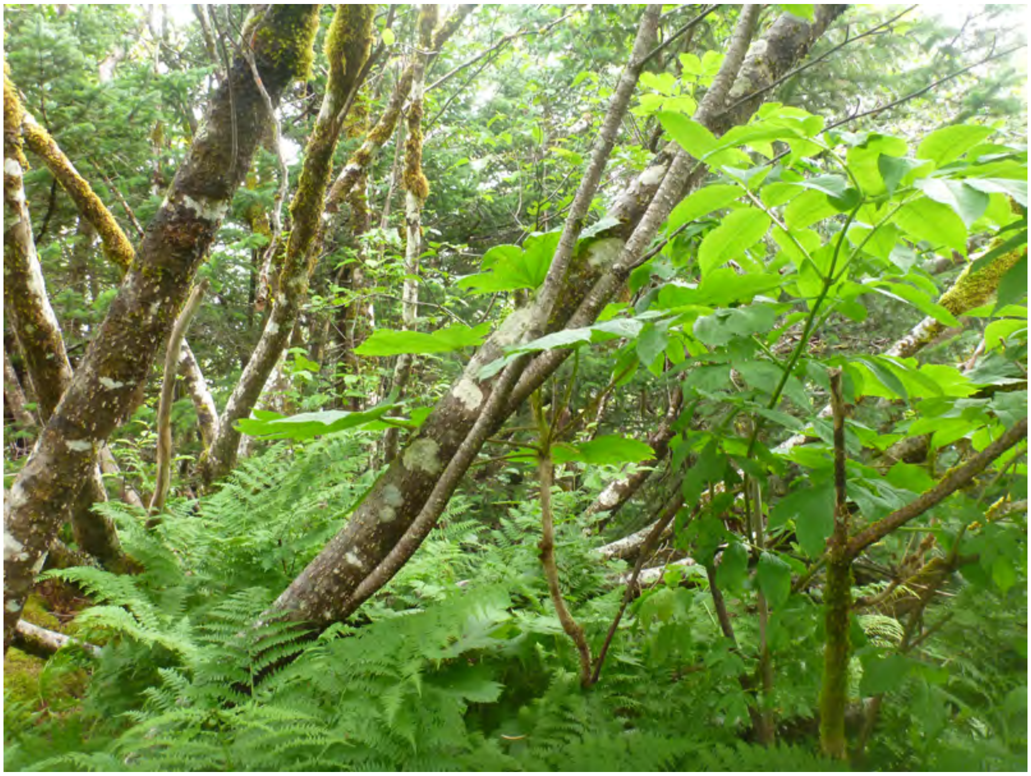

Figure 48.—Typical vegetation in map unit 20OP4.

Typical Profile

Oi—0 to 18 centimeters; peat
Oe—18 to 56 centimeters; mucky peat
Oa—56 to 150 centimeters; muck

Characteristics of the Annoksek Soil

Setting

Landform: Till plains
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 0 to 10 percent
Parent material: Residuum weathered from graywacke

Properties and Qualities

Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None

Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 6.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Forest Loamy Plains (F220XY440AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy, mixed, superactive, acid Lithic Cryorthents

Typical Profile
Oi—0 to 3 centimeters; slightly decomposed plant material
Oa—3 to 12 centimeters; highly decomposed plant material
C—12 to 30 centimeters; sandy loam
R—30 to 200 centimeters; bedrock

Characteristics of the Bulky Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.9 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 10 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 10.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Sandy, mixed Typic Cryaquepts

Typical Profile
Oe—0 to 5 centimeters; moderately decomposed plant material
Bg1—5 to 25 centimeters; sandy loam
Bg2—25 to 50 centimeters; silt loam
Cg—50 to 150 centimeters; sand

Minor Components

Murkbay soils
Percent of map unit: 5 percent
Slope: 0 to 5 percent
Landform: Barrier beaches
Ecological site: Estuarine Herbacous Sandy Coastal Plain (R220XY422AK)
Hydric soil status: No

20OP5—Fossil-Tyeen-Vivid complex, 15 to 45 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 49)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 100 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Fossil and similar soils: 35 percent
Tyeen and similar soils: 25 percent
Vivid and similar soils: 20 percent
Dissimilar minor components: 20 percent

Characteristics of the Fossil Soil

Setting
Landform: Pitted outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 15 to 25 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 5.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e

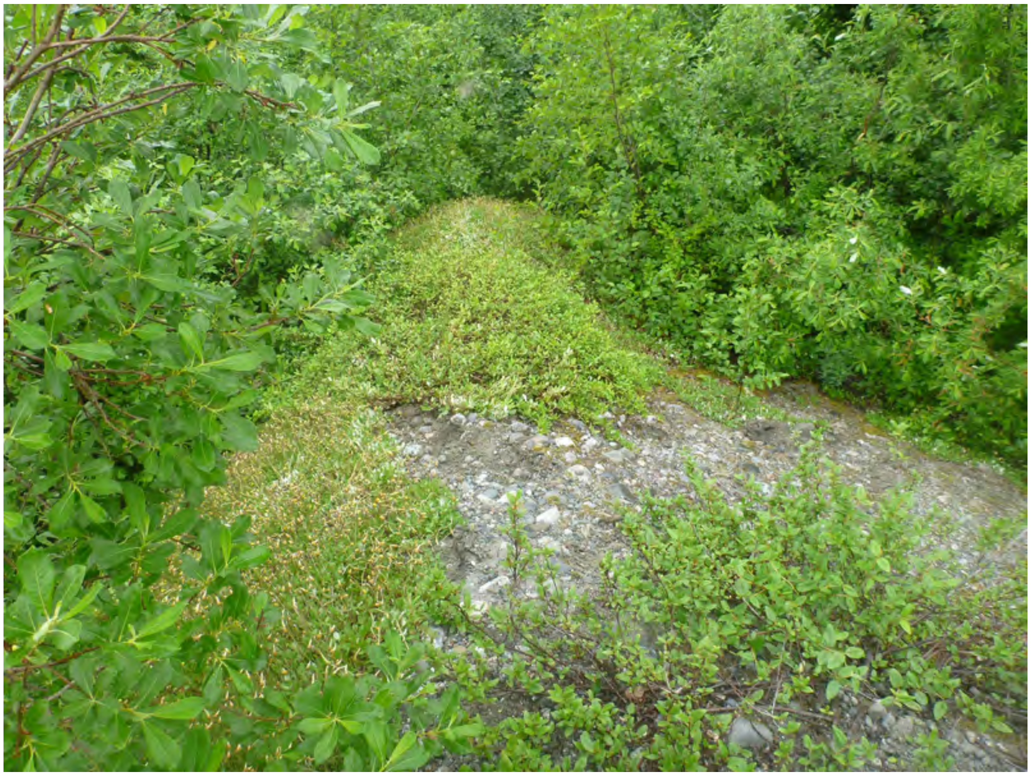

Figure 49.—Typical vegetation in map unit 20OP5.

Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Cryorthents

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
A—10 to 27 centimeters; medium gravelly coarse sand
C1—27 to 50 centimeters; very gravelly coarse sand
C2—50 to 95 centimeters; coarse sand
C3—95 to 150 centimeters; extremely gravelly coarse sand

Characteristics of the Tyeen Soil

Setting
Landform: Glacial-valley floors
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 15 to 45 percent
Parent material: Gravelly till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.9 LEP)
Salinity maximum based on representative value: Nonsaline

Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 8.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 12 centimeters; very gravelly sandy loam
C1—12 to 50 centimeters; very gravelly coarse sandy loam
C2—50 to 150 centimeters; very gravelly sandy loam

Characteristics of the Vivid Soil

Setting
Landform: Glacial-valley floors
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 15 to 20 percent
Parent material: Lacustrine deposits over till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.6 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Occasional (see table 19)
Seasonal water table (depth, kind): About 3 to 11 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 15.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Graminoid Loamy Plain Depression (R220XY436AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryaquents

Typical Profile
Oe—0 to 8 centimeters; moderately decomposed plant material

Cg1—8 to 28 centimeters; silt
2Cg2—28 to 150 centimeters; very cobbly sandy loam

Minor Components

Puffin soils
Percent of map unit: 10 percent
Slope: 0 to 25 percent
Landform: Low flood plains
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: No

Riverwash
Percent of map unit: 10 percent
Slope: 0 to 15 percent
Hydric soil status: Yes

20OP6—Bulky-Bertha-Icy complex, 0 to 10 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 50)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 200 meters
Mean annual precipitation: 850 to 3,312 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Bulky and similar soils: 35 percent
Bertha and similar soils: 30 percent
Icy and similar soils: 15 percent
Dissimilar minor components: 20 percent

Characteristics of the Bulky Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.9 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None

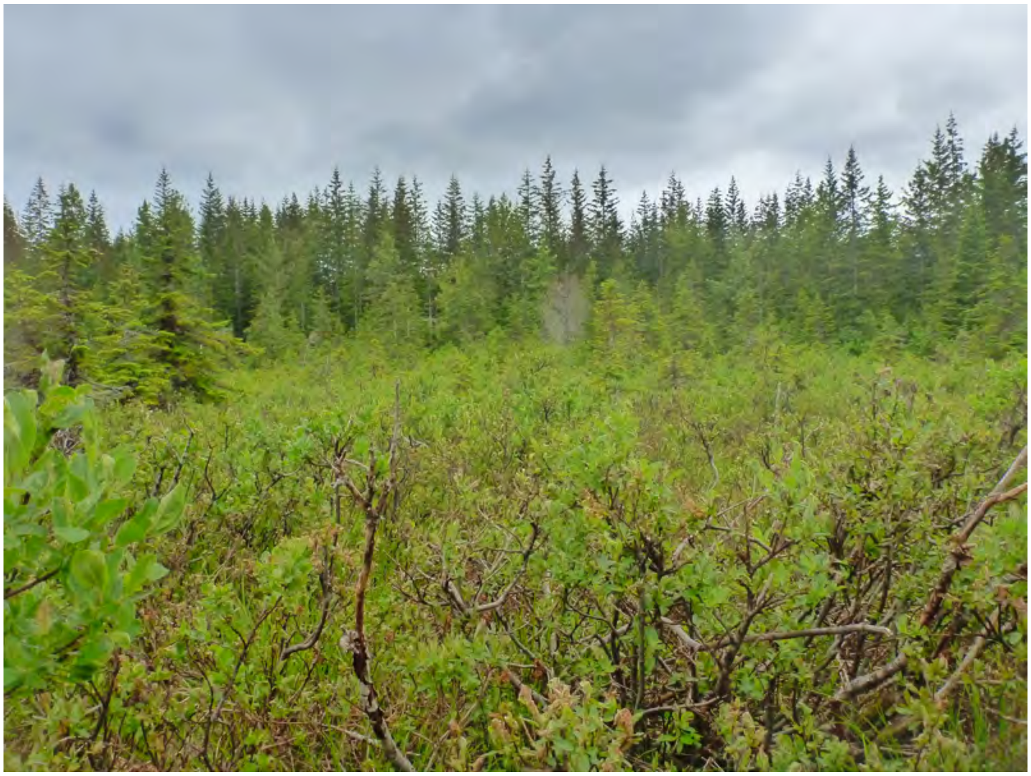

Figure 50.—Typical vegetation in map unit 20OP6.

Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 10 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 10.1 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Sandy, mixed Typic Cryaquepts

Typical Profile

Oe—0 to 5 centimeters; moderately decomposed plant material
Bg1—5 to 25 centimeters; sandy loam
Bg2—25 to 50 centimeters; silt loam
Cg—50 to 150 centimeters; sand

Characteristics of the Bertha Soil

Setting

Landform: High flood plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 2 to 10 percent
Parent material: Sandy alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Cryofluvents

Typical Profile
Oi—0 to 3 centimeters; gravelly slightly decomposed plant material
C1—3 to 13 centimeters; coarse sand
C2—13 to 22 centimeters; extremely gravelly coarse sand
C3—22 to 150 centimeters; coarse sand

Characteristics of the Icy Soil

Setting
Landform: Fluviomarine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Moderate (about 3.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): High (about 29.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)

Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Fine-silty, mixed, superactive, calcareous Typic Cryaquents

Typical Profile
Oe—0 to 20 centimeters; mucky peat
Cg1—20 to 89 centimeters; silt loam
Cg2—89 to 119 centimeters; silt loam
2Cg3—119 to 150 centimeters; loamy sand

Minor Components

Puffin soils
Percent of map unit: 10 percent
Slope: 0 to 15 percent
Landform: Low flood plains
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: No

Riverwash
Percent of map unit: 10 percent
Slope: 0 to 15 percent
Hydric soil status: Yes

20OPE—Tyeen-Shagcove-Puffin complex, 0 to 15 percent slopes

Map Unit Setting

Landscape: Mountain valleys (figs. 51 and 52)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 100 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 0 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Tyeen and similar soils: 40 percent
Shagcove and similar soils: 30 percent
Puffin and similar soils: 20 percent
Dissimilar minor components: 10 percent

Characteristics of the Tyeen Soil

Setting
Landform: Glacial-valley floors
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 5 to 15 percent
Parent material: Gravelly till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.9 LEP)
Salinity maximum based on representative value: Nonsaline

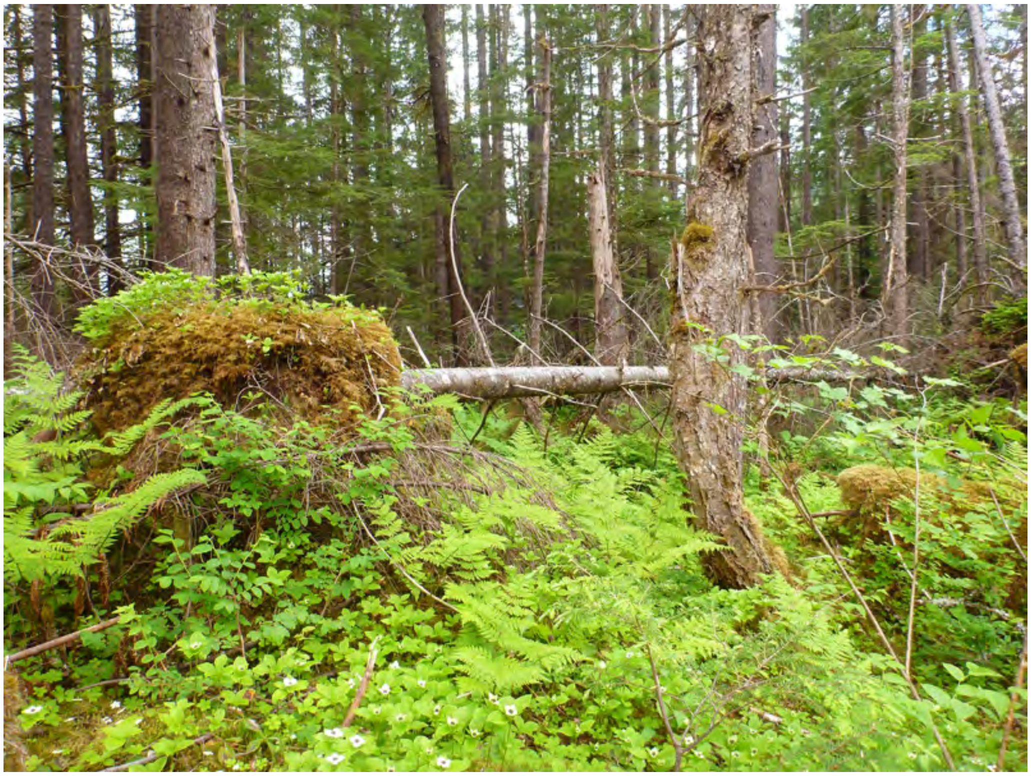

Figure 51.—Typical vegetation in map unit 20OPE.

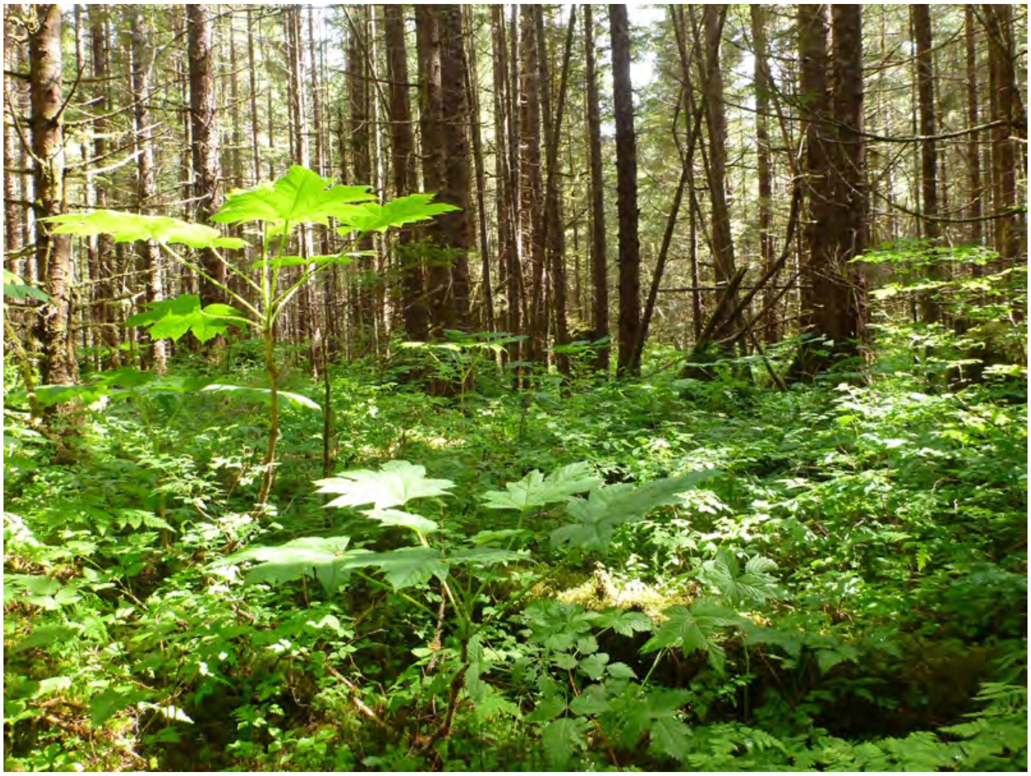

Figure 52.—Typical vegetation in map unit 20OPE.

Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 8.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 12 centimeters; very gravelly sandy loam
C1—12 to 50 centimeters; very gravelly coarse sandy loam
C2—50 to 150 centimeters; very gravelly sandy loam

Characteristics of the Shagcove Soil

Setting
Landform: Depressions and valley trains
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 1 to 2 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Somewhat poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 35 to 55 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 5.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Loamy Plain Wet (F220XY435AK)
Hydric soil status: No
Hydrologic soil group: A/D
Soil classification: Sandy-skeletal, mixed Aquic Cryorthents

Typical Profile
Oi—0 to 3 centimeters; slightly decomposed plant material

A—3 to 7 centimeters; cobbly fine sandy loam
C1—7 to 49 centimeters; very cobbly loamy coarse sand
C2—49 to 60 centimeters; very cobbly loamy coarse sand
Cg—60 to 150 centimeters; very gravelly loamy fine sand

Characteristics of the Puffin Soil

Setting
Landform: Low flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 0 to 10 percent
Parent material: Alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Somewhat poorly drained
Flooding frequency: Frequent (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): About 65 to 75 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 2.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Oxyaquic Cryorthents

Typical Profile
C1—0 to 70 centimeters; extremely gravelly loamy coarse sand
C2—70 to 150 centimeters; extremely gravelly coarse sand

Minor Components

Riverwash
Percent of map unit: 10 percent
Slope: 0 to 8 percent
Hydric soil status: Yes

20OV1—Perouse, frequently ponded-Perouse complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 53)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 1.0 to 20 meters
Mean annual precipitation: 850 to 1,815 millimeters

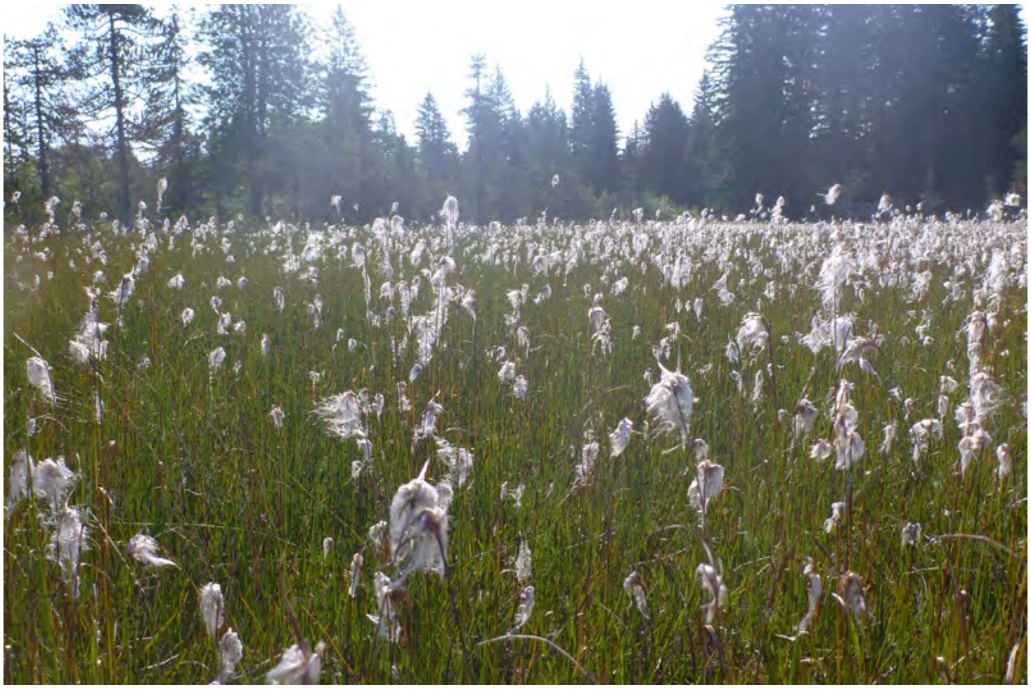

Figure 53.—Typical vegetation in map unit 20OV1.

Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Perouse, frequently ponded, and similar soils: 60 percent
Perouse and similar soils: 40 percent

Characteristics of the Perouse, Frequently Ponded, Soil

Setting

Landform: Outwash deltas
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 2 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)

Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat
Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand
Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

Characteristics of the Perouse Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat
Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand
Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

20OW1—Perouse-Gustavus-Perouse, frequently ponded complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 54)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 1.0 to 45 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Perouse and similar soils: 40 percent
Gustavus and similar soils: 30 percent
Perouse, frequently ponded, and similar soils: 20 percent
Dissimilar minor components: 10 percent

Characteristics of the Perouse Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile
Oe—0 to 4 centimeters; mucky peat
Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand

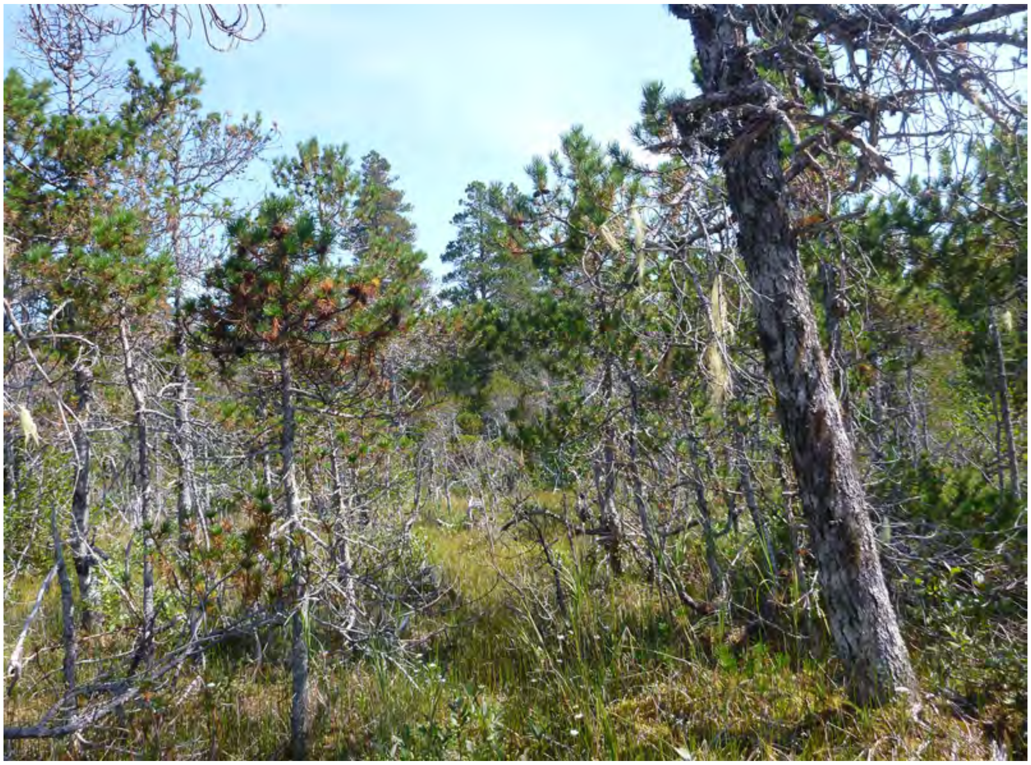

Figure 54.—Typical vegetation in map unit 20OW1.

Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

Characteristics of the Gustavus Soil

Setting

Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 2 to 5 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 11.4 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Haplocryepts

Typical Profile

Oe—0 to 12 centimeters; moderately decomposed plant material
Bw—12 to 33 centimeters; fine sandy loam
C1—33 to 68 centimeters; loamy sand
C2—68 to 140 centimeters; loamy sand
C3—140 to 150 centimeters; coarse sand

Characteristics of the Perouse, Frequently Ponded, Soil

Setting

Landform: Outwash deltas
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 2 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile

Oe—0 to 4 centimeters; mucky peat
Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand
Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

Minor Components

Scidmore soils

Percent of map unit: 10 percent

Slope: 2 to 10 percent
Landform: Pitted outwash plains
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

20OWF—Fairweather-Icy complex, 0 to 5 percent slopes

Map Unit Setting

Note: This map unit occurs outside the park in the small community of Gustavus. A locator map is not provided in the Appendix.

Landscape: Mountain valleys (fig. 55)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 20 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Fairweather and similar soils: 70 percent
Icy and similar soils: 30 percent

Characteristics of the Fairweather Soil

Setting
Landform: Pitted outwash plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Glaciolacustrine deposits over outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 1.6 LEP)
Salinity maximum based on representative value: Very slightly saline (about 3.0 mmhos/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 2

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: C/D

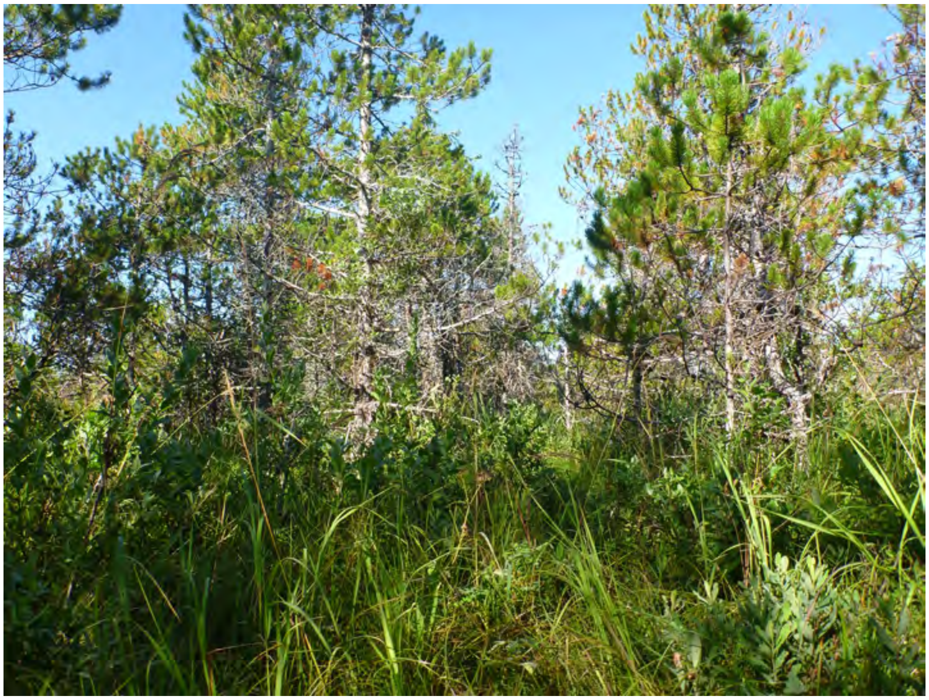

Figure 55.—Typical vegetation in map unit 20OWF.

Soil classification: Loamy over sandy or sandy-skeletal, mixed, superactive, calcareous Typic Cryaquents

Typical Profile

Oi—0 to 2 centimeters; peat
A—2 to 5 centimeters; silt loam
Cg—5 to 38 centimeters; silt loam
2Cg—38 to 150 centimeters; sand

Characteristics of the Icy Soil

Setting

Landform: Fluviomarine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Alluvium

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Moderate (about 3.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None

Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): High (about 29.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Fine-silty, mixed, superactive, calcareous Typic Cryaquents

Typical Profile
Oe—0 to 20 centimeters; mucky peat
Cg1—20 to 89 centimeters; silt loam
Cg2—89 to 119 centimeters; silt loam
2Cg3—119 to 150 centimeters; loamy sand

20PL1—Tyeen-Cenotaph-Fossil complex, 0 to 30 percent slopes

Map Unit Setting

Landscape: Mountain valleys
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 100 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Tyeen and similar soils: 40 percent
Cenotaph and similar soils: 25 percent
Fossil and similar soils: 20 percent
Dissimilar minor components: 15 percent

Characteristics of the Tyeen Soil

Setting
Landform: Glacial-valley floors
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 5 to 30 percent
Parent material: Gravelly till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.9 LEP)
Salinity maximum based on representative value: Nonsaline

Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 8.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 12 centimeters; very gravelly sandy loam
C1—12 to 50 centimeters; very gravelly coarse sandy loam
C2—50 to 150 centimeters; very gravelly sandy loam

Characteristics of the Cenotaph Soil

Setting
Landform: Glacial-valley floors
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Organic material over till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.8 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 20 to 30 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 16.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Loamy Plain Wet (F220XY435AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Coarse-loamy, mixed, superactive, calcareous Typic Cryaquents

Typical Profile
Oe—0 to 17 centimeters; moderately decomposed plant material
A—17 to 25 centimeters; gravelly fine sandy loam
Cg1—25 to 100 centimeters; gravelly fine sandy loam
Cg2—100 to 150 centimeters; gravelly loamy fine sand

Characteristics of the Fossil Soil

Setting
Landform: Pitted outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 2 to 15 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 5.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Cryorthents

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
A—10 to 27 centimeters; medium gravelly coarse sand
C1—27 to 50 centimeters; very gravelly coarse sand
C2—50 to 95 centimeters; coarse sand
C3—95 to 150 centimeters; extremely gravelly coarse sand

Minor Components

Lituya soils
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Fluviomarine terraces
Ecological site: Estuarine Herbacous Sandy Coastal Plain (R220XY422AK)
Hydric soil status: No

Water
Percent of map unit: 5 percent

20PL2—Tyeen-Fossil-Fingers complex, 0 to 30 percent slopes

Map Unit Setting

Landscape: Mountain valleys (figs. 56 and 57)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 130 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Tyeen and similar soils: 35 percent
Fossil and similar soils: 30 percent
Fingers and similar soils: 15 percent
Dissimilar minor components: 20 percent

Characteristics of the Tyeen Soil

Setting
Landform: Glacial-valley floors
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: East
Aspect range: North to south (clockwise)
Slope range: 5 to 30 percent
Parent material: Gravelly till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.9 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 8.7 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 12 centimeters; very gravelly sandy loam

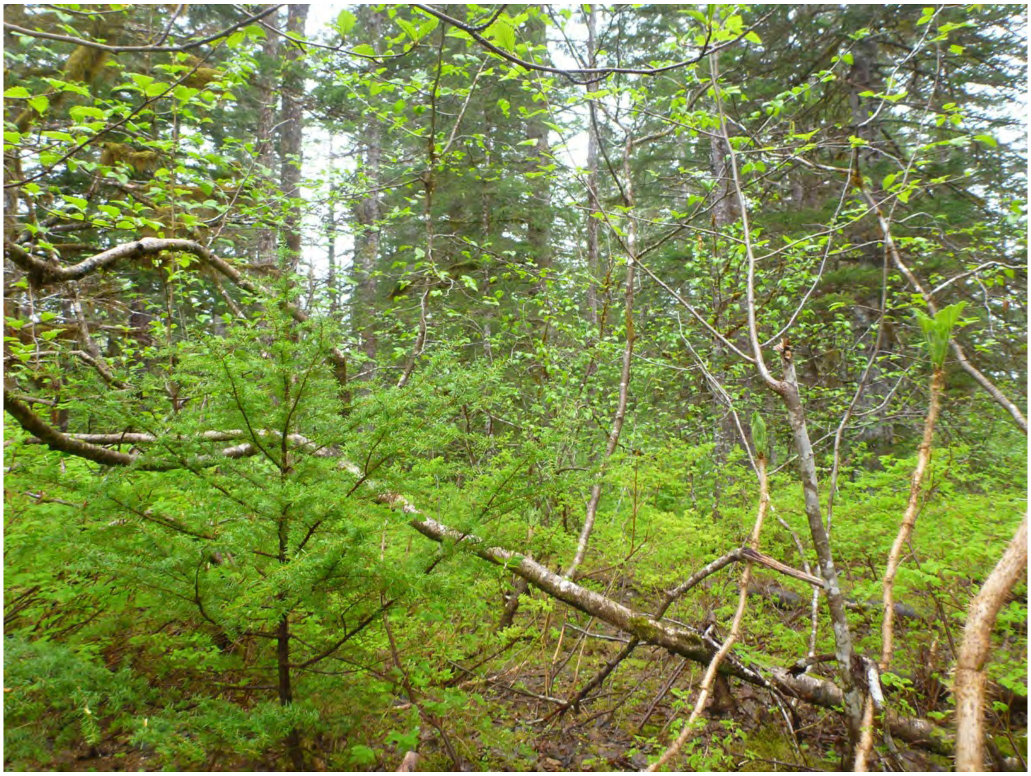

Figure 56.—Typical vegetation in map unit 20PL2.

C1—12 to 50 centimeters; very gravelly coarse sandy loam
C2—50 to 150 centimeters; very gravelly sandy loam

Characteristics of the Fossil Soil

Setting

Landform: Pitted outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 2 to 15 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 5.7 centimeters)

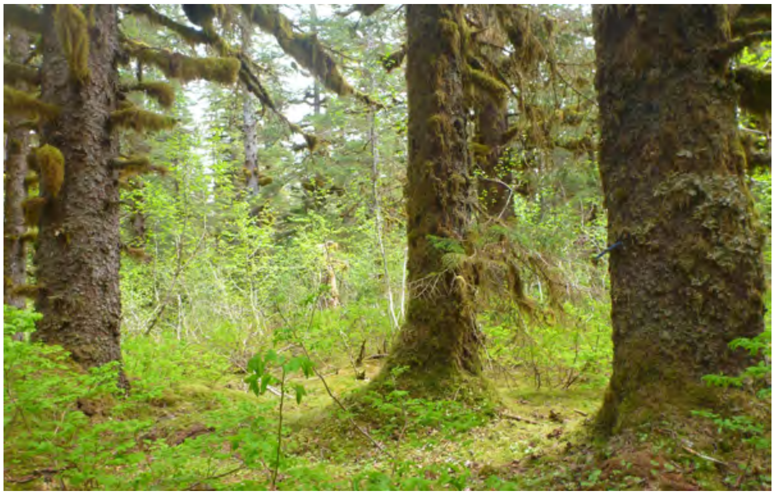

Figure 57.—Typical vegetation in map unit 20PL2.

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Typic Cryorthents

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
A—10 to 27 centimeters; medium gravelly coarse sand
C1—27 to 50 centimeters; very gravelly coarse sand
C2—50 to 95 centimeters; coarse sand
C3—95 to 150 centimeters; extremely gravelly coarse sand

Characteristics of the Fingers Soil

Setting
Landform: Drainageways on glaciated plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 8 percent
Parent material: Alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 2

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Somewhat poorly drained
Flooding frequency: None
Ponding frequency: None

Seasonal water table (depth, kind): About 35 to 48 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 2.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Shrub Gravelly Drainageway (R220XY425AK)
Hydric soil status: No
Hydrologic soil group: A/D
Soil classification: Sandy-skeletal, mixed Oxyaquic Cryorthents

Typical Profile
Oi—0 to 2 centimeters; slightly decomposed plant material
A—2 to 8 centimeters; very gravelly loamy coarse sand
C1—8 to 43 centimeters; extremely gravelly coarse sand
C2—43 to 150 centimeters; extremely gravelly coarse sand

Minor Components

Vivid soils
Percent of map unit: 10 percent
Slope: 0 to 3 percent
Landform: Glacial-valley floors
Ecological site: Maritime Graminoid Loamy Plain Depression (R220XY436AK)
Hydric soil status: Yes

Water
Percent of map unit: 10 percent

20PL3—Kashoto-Annoksek-Ancon complex, 0 to 25 percent slopes

Map Unit Setting

Landscape: Till plains (fig. 58)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 130 meters
Mean annual precipitation: 850 to 3,312 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Kashoto and similar soils: 35 percent
Annoksek and similar soils: 25 percent
Ancon and similar soils: 20 percent
Dissimilar minor components: 20 percent

Characteristics of the Kashoto Soil

Setting
Landform: Muskegs on glaciated plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 10 percent
Parent material: Mossy organic material

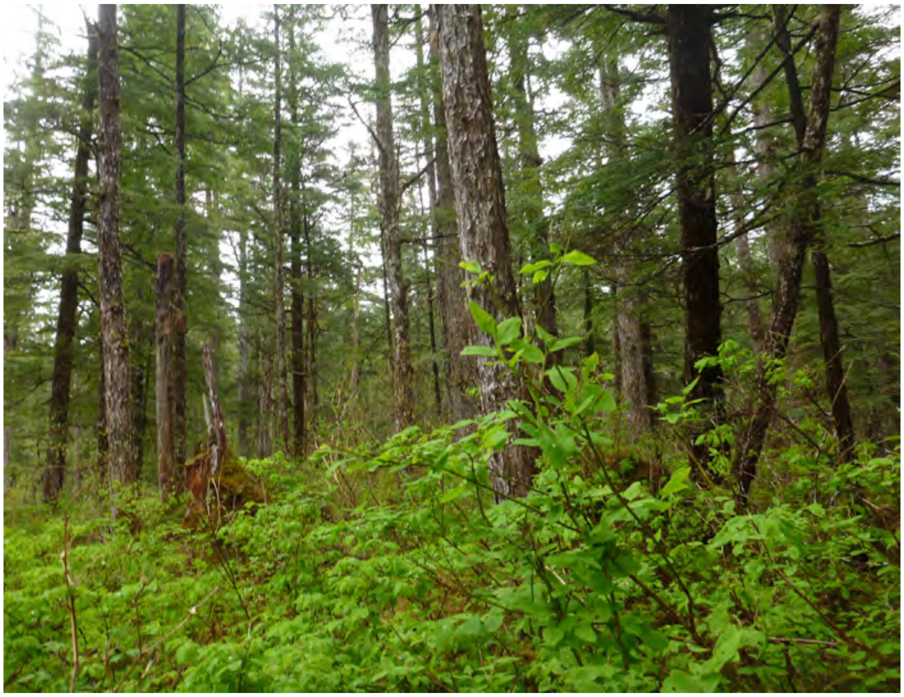

Figure 58.—Typical vegetation in map unit 20PL3.

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 10 to 22 centimeters, perched (see table 19)
Available water capacity (entire profile): Very high (about 67.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Woodland Peat Plain Depression (F220XY434AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Dysic Typic Cryosaprists

Typical Profile
Oi—0 to 18 centimeters; peat
Oe—18 to 56 centimeters; mucky peat
Oa—56 to 150 centimeters; muck

Characteristics of the Annoksek Soil

Setting
Landform: Till plains
Landform position (three-dimensional): Talf

Down-slope shape: Convex
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 3 to 15 percent
Parent material: Residuum weathered from graywacke

Properties and Qualities
Depth to restrictive feature: 25 to 50 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 6.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Forest Loamy Plains (F220XY440AK)
Hydric soil status: No
Hydrologic soil group: D
Soil classification: Loamy, mixed, superactive, acid Lithic Cryorthents

Typical Profile
Oi—0 to 3 centimeters; slightly decomposed plant material
Oa—3 to 12 centimeters; highly decomposed plant material
C—12 to 30 centimeters; sandy loam
R—30 to 200 centimeters; bedrock

Characteristics of the Ancon Soil

Setting
Landform: Glaciated plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Aspect, representative: West
Aspect range: South to north (clockwise)
Slope range: 0 to 25 percent
Parent material: Till over residuum weathered from igneous, metamorphic and sedimentary rock

Properties and Qualities
Depth to restrictive feature: 100 to 150 centimeters to lithic bedrock
Shrink-swell potential: Moderate (about 3.7 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: None

Ponding frequency: None
Seasonal water table (depth, kind): About 50 to 58 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 12.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A/D
Soil classification: Coarse-loamy, mixed, superactive Aquic Haplocryods

Typical Profile
Oe—0 to 8 centimeters; moderately decomposed plant material
A—8 to 21 centimeters; fine sandy loam
E—21 to 24 centimeters; fine sandy loam
Bs/Bhs—24 to 53 centimeters; fine sandy loam
Bs—53 to 103 centimeters; coarse sandy loam
2R—103 to 200 centimeters; bedrock

Minor Components

Fingers soils
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Drainageways on glaciated plains
Ecological site: Maritime Shrub Gravelly Drainageway (R220XY425AK)
Hydric soil status: No

Water
Percent of map unit: 10 percent

20PL6—Tidalwave-Drybay-Puffin complex, 0 to 10 percent slopes

Map Unit Setting

Landscape: Alluvial plains (fig. 59)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 200 meters
Mean annual precipitation: 1,991 to 6,356 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Tidalwave and similar soils: 60 percent
Drybay and similar soils: 25 percent
Puffin and similar soils: 15 percent

Characteristics of the Tidalwave Soil

Setting
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects

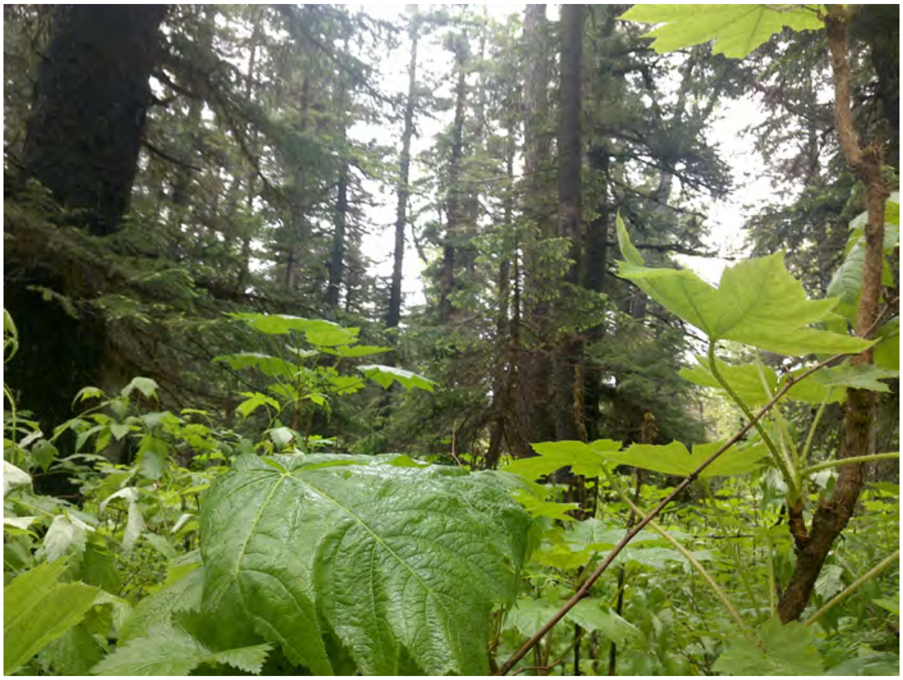

Figure 59.—Typical vegetation in map unit 20PL6.

Slope range: 0 to 8 percent
Parent material: Loess over alluvium

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 70 to 80 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.8 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 4e
Ecological site: Maritime Forest Gravelly Alluvial Plain (F220XY460AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Sandy, mixed Oxyaquic Cryorthents

Typical Profile

Oa—0 to 4 centimeters; highly decomposed plant material
A—4 to 16 centimeters; very fine sandy loam
Bw—16 to 24 centimeters; fine sandy loam
BC—24 to 49 centimeters; sandy loam
2C—49 to 150 centimeters; gravelly coarse sand

Characteristics of the Drybay Soil

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 10 percent
Parent material: Silty eolian deposits over sandy and gravelly alluvium

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Alluvial Plain (F220XY460AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile

Oe—0 to 2 centimeters; moderately decomposed plant material
A—2 to 11 centimeters; silt loam
2C1—11 to 24 centimeters; very gravelly coarse sandy loam
2C2—24 to 60 centimeters; extremely gravelly coarse sand
2C3—60 to 150 centimeters; extremely gravelly coarse sand

Characteristics of the Puffin Soil

Setting

Landform: Low flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 0 to 2 percent
Parent material: Alluvium

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Somewhat poorly drained
Flooding frequency: Frequent (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): About 65 to 75 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 2.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Oxyaquic Cryorthents

Typical Profile
C1—0 to 70 centimeters; extremely gravelly loamy coarse sand
C2—70 to 150 centimeters; extremely gravelly coarse sand

20PLD—Typic Cryaquents-Typic Cryorthents association, flat lowlands, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 30 meters
Mean annual precipitation: 3,556 to 4,318 millimeters
Mean annual air temperature: 2 to 6 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Typic Cryaquents and similar soils: 55 percent
Typic Cryorthents and similar soils: 30 percent
Dissimilar minor components: 15 percent

Characteristics of the Typic Cryaquents

Setting
Landform: Depressions on outwash plains and dune slacks on beach plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Marine deposits and/or glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface, perched (see table 19)
Available water capacity (entire profile): Low (about 8.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Typic Cryaquents

Typical Profile
Oe—0 to 7 centimeters; mucky peat
A—7 to 15 centimeters; fine sandy loam
C—15 to 32 centimeters; sand
Cg1—32 to 51 centimeters; sand
Cg2—51 to 72 centimeters; sand
Cg3—72 to 152 centimeters; sand

Characteristics of the Typic Cryorthents

Setting
Landform: Beach ridges, dunes, and outwash plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve, talf, and rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Beach sand and/or glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: Rare (see table 19)
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 7.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Sandy Plains Eolian (F220XY466AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Typic Cryorthents

Typical Profile
Oa—0 to 8 centimeters; highly decomposed plant material
A—8 to 20 centimeters; sand
C1—20 to 46 centimeters; sand
C2—46 to 49 centimeters; very fine sandy loam
C3—49 to 152 centimeters; gravelly coarse sand

Minor Components

Oxyaquic Cryopsamments
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Flats
Ecological site: Maritime Forest Sandy Plains Eolian (F220XY466AK)
Hydric soil status: No

Typic Cryopsamments
Percent of map unit: 5 percent
Slope: 0 to 5 percent
Landform: Beach ridges
Ecological site: Maritime Forest Sandy Plains Eolian (F220XY466AK)
Hydric soil status: No

20RW2—Riverwash-Oxyaquic Cryorthents complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 61 meters
Mean annual precipitation: 3,556 to 4,318 millimeters
Mean annual air temperature: 2 to 6 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Riverwash: 60 percent
Oxyaquic Cryorthents and similar soils: 25 percent
Dissimilar minor components: 15 percent

Description of Riverwash

Riverwash consists of loose rock fragments of various sizes, ranging from sands to boulders, that are generally well rounded and mostly composed of limestone and dolomite. This material lacks soil development and is extremely sparsely vegetated.

Characteristics of the Oxyaquic Cryorthents

Setting
Landform: Flood plains on alluvial plains
Landform position (three-dimensional): Talf and rise
Down-slope shape: Linear, concave
Across-slope shape: Convex, linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium and/or glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: Rare (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): About 45 to 152 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 5.4 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Oxyaquic Cryorthents

Typical Profile
Oe—0 to 8 centimeters; moderately decomposed plant material
A—8 to 15 centimeters; gravelly sand
C1—15 to 38 centimeters; gravelly coarse sand
C2—38 to 152 centimeters; very gravelly coarse sand

Minor Components

Water
Percent of map unit: 10 percent

Typic Cryaquents
Percent of map unit: 5 percent
Slope: 0 to 5 percent
Landform: Flood plains on alluvial plains
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: Yes

20SC—Beaches-Typic Cryopsamments complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains (fig. 60)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 3.0 to 15 meters
Mean annual precipitation: 3,556 to 4,318 millimeters
Mean annual air temperature: 2 to 6 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Beaches: 60 percent
Typic Cryopsamments and similar soils: 30 percent
Dissimilar minor components: 10 percent

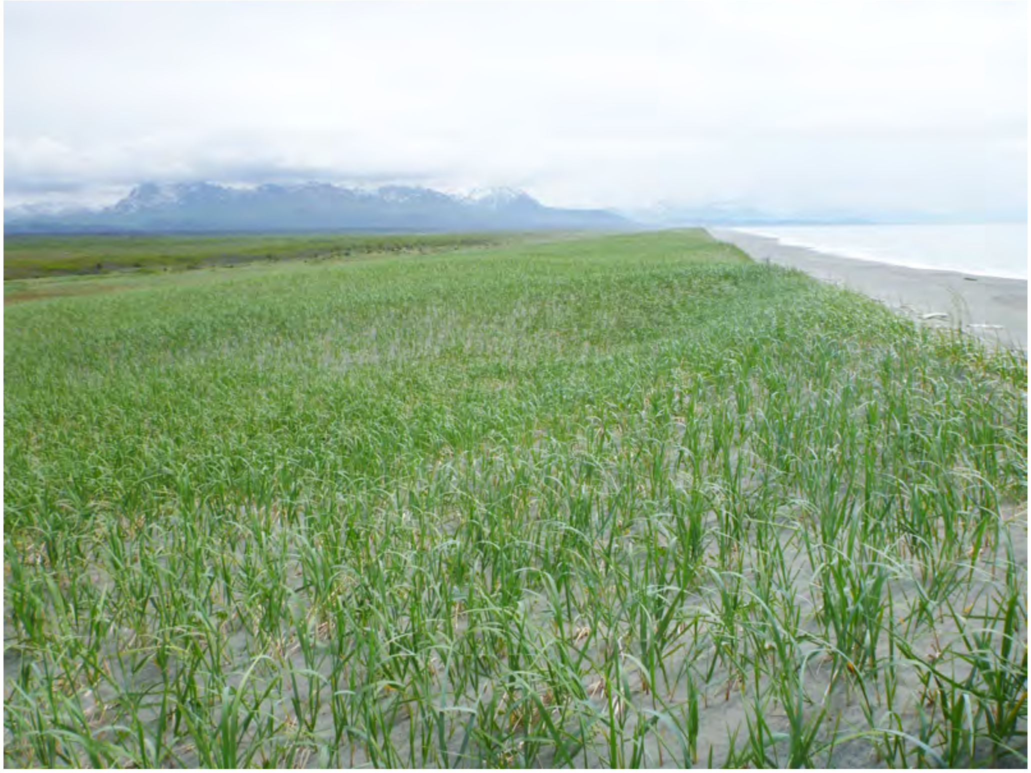

Figure 60.—Typical vegetation in map unit 20SC.

Description of Beaches

Beaches are sandy, gravelly, or cobbly shores that are washed and rewashed by waves. The areas may be partly covered with water during high tides or storms.

Characteristics of the Typic Cryopsamments

Setting

Landform: Beach ridges
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Beach sand

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: Rare (see table 19)
Ponding frequency: None

Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 7.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Typic Cryopsamments

Typical Profile
Oi—0 to 5 centimeters; slightly decomposed plant material
AC—5 to 23 centimeters; sand
C—23 to 152 centimeters; sand

Minor Components

Water
Percent of map unit: 10 percent

20TE2—Tidalwave-Drybay complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Alluvial plains (fig. 61)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 200 meters
Mean annual precipitation: 1,991 to 6,356 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Tidalwave and similar soils: 50 percent
Drybay and similar soils: 30 percent
Dissimilar minor components: 20 percent

Characteristics of the Tidalwave Soil

Setting
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Loess over alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained

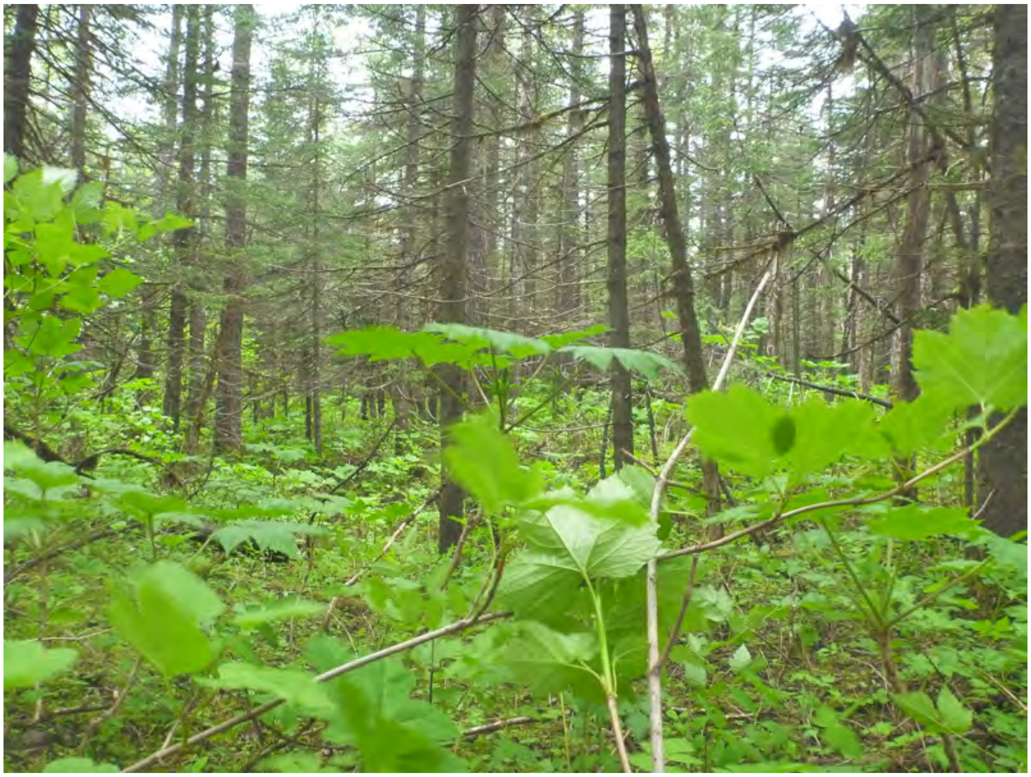

Figure 61.—Typical vegetation in map unit 20TE2.

Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 70 to 80 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.8 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 4s
Ecological site: Maritime Forest Gravelly Alluvial Plain (F220XY460AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Sandy, mixed Oxyaquic Cryorthents

Typical Profile

Oa—0 to 4 centimeters; highly decomposed plant material
A—4 to 16 centimeters; very fine sandy loam
Bw—16 to 24 centimeters; fine sandy loam
BC—24 to 49 centimeters; sandy loam
2C—49 to 150 centimeters; gravelly coarse sand

Characteristics of the Drybay Soil

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects

Slope range: 0 to 5 percent
Parent material: Silty eolian deposits over sandy and gravelly alluvium

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.2 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Alluvial Plain (F220XY460AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile
Oe—0 to 2 centimeters; moderately decomposed plant material
A—2 to 11 centimeters; silt loam
2C1—11 to 24 centimeters; very gravelly coarse sandy loam
2C2—24 to 60 centimeters; extremely gravelly coarse sand
2C3—60 to 150 centimeters; extremely gravelly coarse sand

Minor Components

Ashmun soils
Percent of map unit: 10 percent
Slope: 0 to 2 percent
Landform: Depressions on alluvial flats
Ecological site: Maritime Shrub Sandy Drainageways (R220XY461AK)
Hydric soil status: Yes

Puffin soils
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Low flood plains
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: No

20TF1—Water, saline-Astrolable-Murkbay complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Shore complexes (figs. 62 and 63)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 20 meters
Mean annual precipitation: 850 to 1,815 millimeters

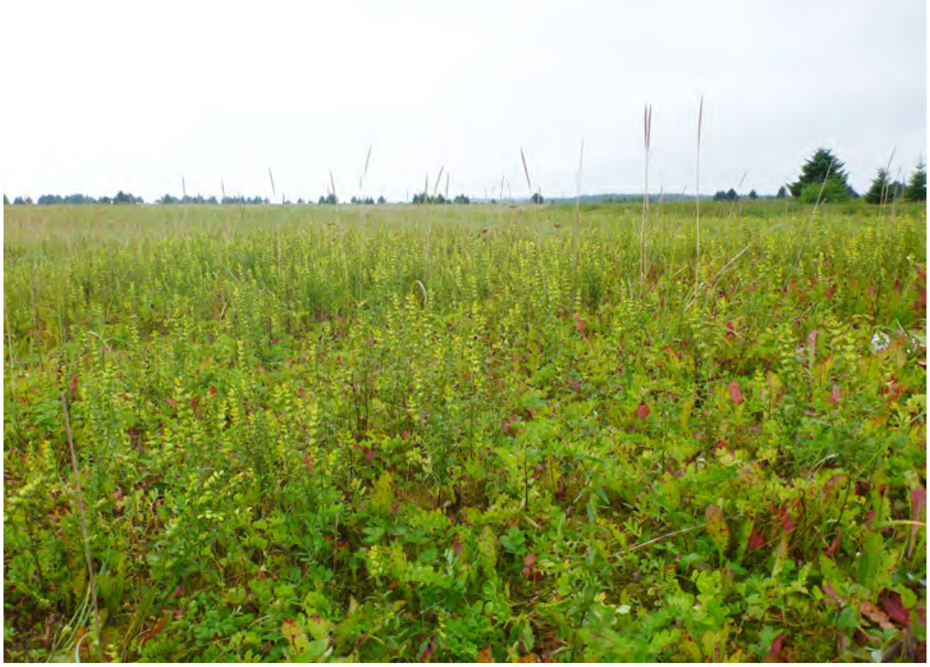

Figure 62.—Typical vegetation in map unit 20TF1.

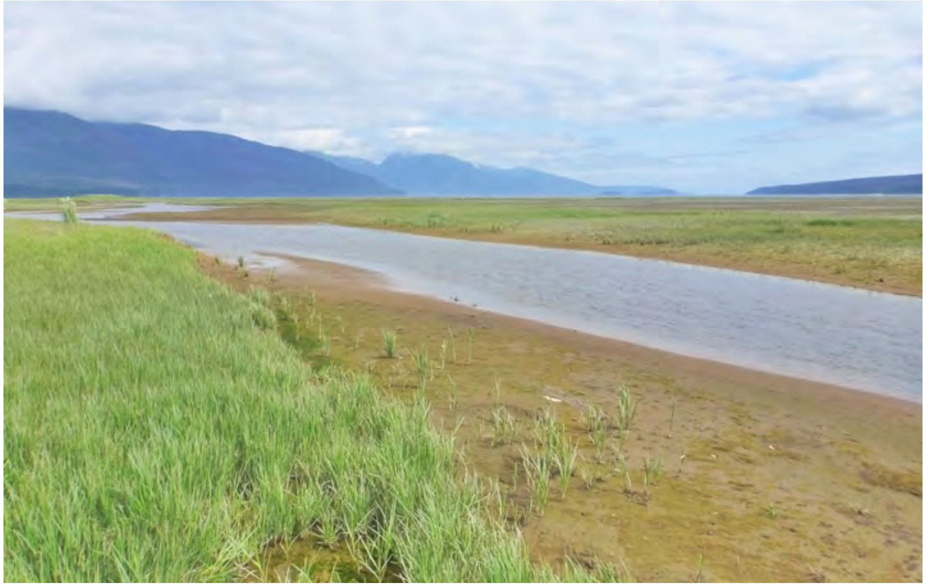

Figure 63.—Typical vegetation in map unit 20TF1.

Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Water, saline: 70 percent
Astrolable and similar soils: 15 percent
Murkbay and similar soils: 15 percent

Description of Water, Saline

This component consists of areas of salt water, including open ocean, bays, straits, and channels.

Characteristics of the Astrolable Soil

Setting

Landform: Tidal marshes
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Marine deposits

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 2.7 LEP)
Salinity maximum based on representative value: Nonsaline (about 1.0 mmho/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: Very frequent (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 0.5 centimeter)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes
Hydrologic soil group: C/D
Soil classification: Sandy-skeletal, mixed Typic Cryaquents

Typical Profile

Cg1—0 to 25 centimeters; sandy clay loam
Cg2—25 to 150 centimeters; extremely gravelly coarse sand

Characteristics of the Murkbay Soil

Setting

Landform: Barrier beaches
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Convex
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Fluviomarine deposits

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline (about 1.8 mmhos/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 1

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 6.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Sandy Coastal Plain (R220XY422AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Mixed Typic Cryopsamments

Typical Profile
Oi—0 to 1 centimeter; slightly decomposed plant material
A—1 to 3 centimeters; loamy sand
C1—3 to 25 centimeters; sand
C2—25 to 80 centimeters; sand
C3—80 to 125 centimeters; fine sand
C4—125 to 150 centimeters; sand

20TF3—Water, saline-Astrolable-Beartrack complex, 0 to 3 percent slopes

Map Unit Setting

Landscape: Shore complexes (figs. 64 and 65)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 100 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Water, saline: 55 percent
Astrolable and similar soils: 20 percent
Beartrack and similar soils: 15 percent
Dissimilar minor components: 10 percent

Description of Water, Saline

This component consists of areas of salt water, including open ocean, bays, straits, and channels.

Characteristics of the Astrolable Soil

Setting
Landform: Tidal marshes
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects

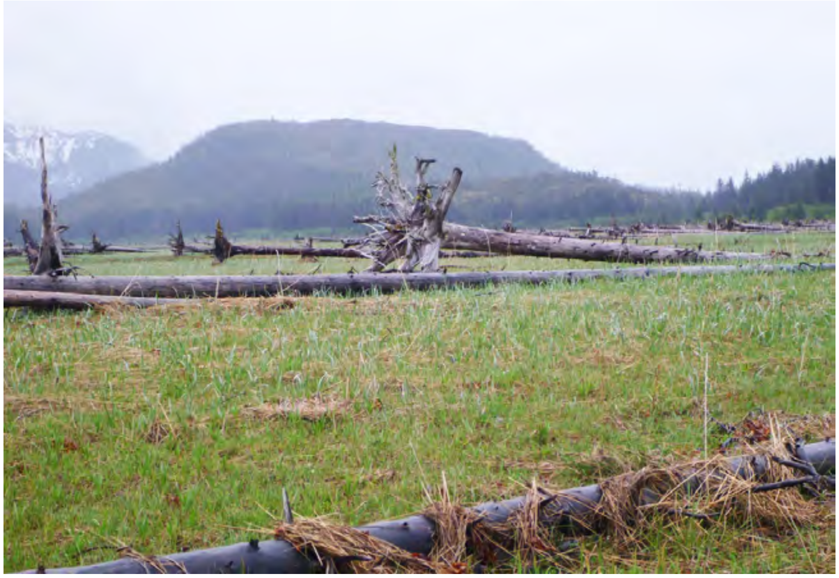

Figure 64.—Fluviomarine terrace talf in map unit 20TF3.

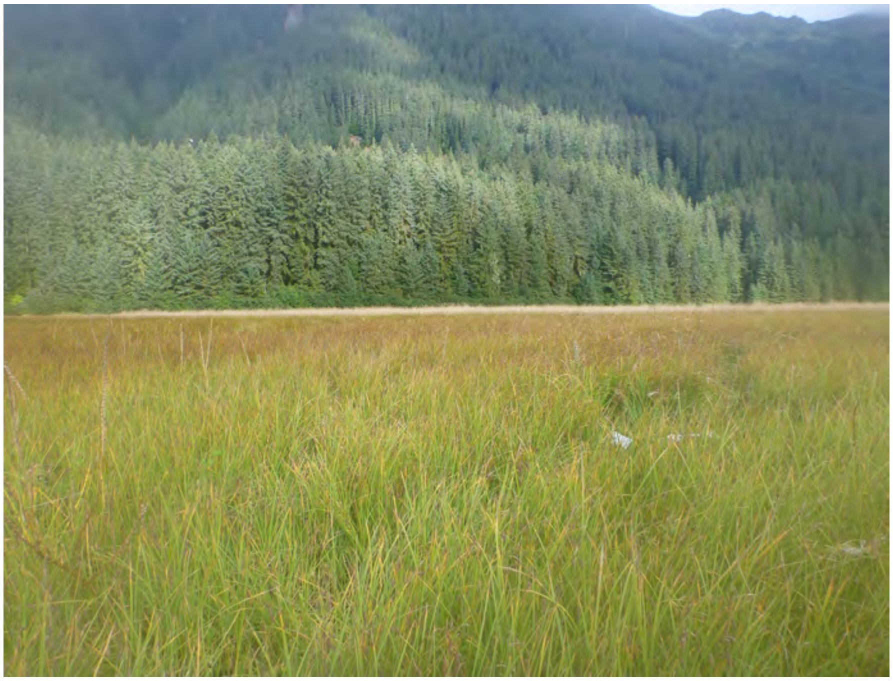

Figure 65.—Typical vegetation in map unit 20TF3.

Slope range: 0 to 1 percent
Parent material: Marine deposits

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 2.7 LEP)
Salinity maximum based on representative value: Nonsaline (about 1.0 mmho/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: Very frequent (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 0.5 centimeter)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes
Hydrologic soil group: C/D
Soil classification: Sandy-skeletal, mixed Typic Cryaquents

Typical Profile

Cg1—0 to 25 centimeters; sandy clay loam
Cg2—25 to 150 centimeters; extremely gravelly coarse sand

Characteristics of the Beartrack Soil

Setting

Landform: Fluviomarine bottoms
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Silty estuarine deposits

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 1.1 LEP)
Salinity maximum based on representative value: Slightly saline (about 4.0 mmhos/cm)
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: Frequent (see table 19)
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Moderate (about 21.3 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 5w
Ecological site: Estuarine Herbacous Gravelly Coastal Plain (R220XY329AK)
Hydric soil status: Yes
Hydrologic soil group: B/D
Soil classification: Coarse-silty, mixed, superactive, calcareous Typic Cryaquents

Typical Profile

Oe—0 to 2 centimeters; moderately decomposed plant material
Cg1—2 to 21 centimeters; silt loam

Cg2—21 to 40 centimeters; silt loam
Cg3—40 to 150 centimeters; silt loam

Minor Components

Lituya soils
Percent of map unit: 10 percent
Slope: 0 to 3 percent
Landform: Fluviomarine terraces
Ecological site: Estuarine Herbacous Sandy Coastal Plain (R220XY422AK)
Hydric soil status: No

20TH1—Ibach-Lamplugh-Bartlettcove complex, 2 to 35 percent slopes

Map Unit Setting

Landscape: Till plains (figs. 66 and 67)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 0.0 to 50 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Ibach and similar soils: 40 percent
Lamplugh and similar soils: 30 percent
Bartlettcove and similar soils: 20 percent
Dissimilar minor components: 10 percent

Characteristics of the Ibach Soil

Setting
Landform: Moraines
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 2 to 35 percent
Parent material: Till

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 8.4 centimeters)

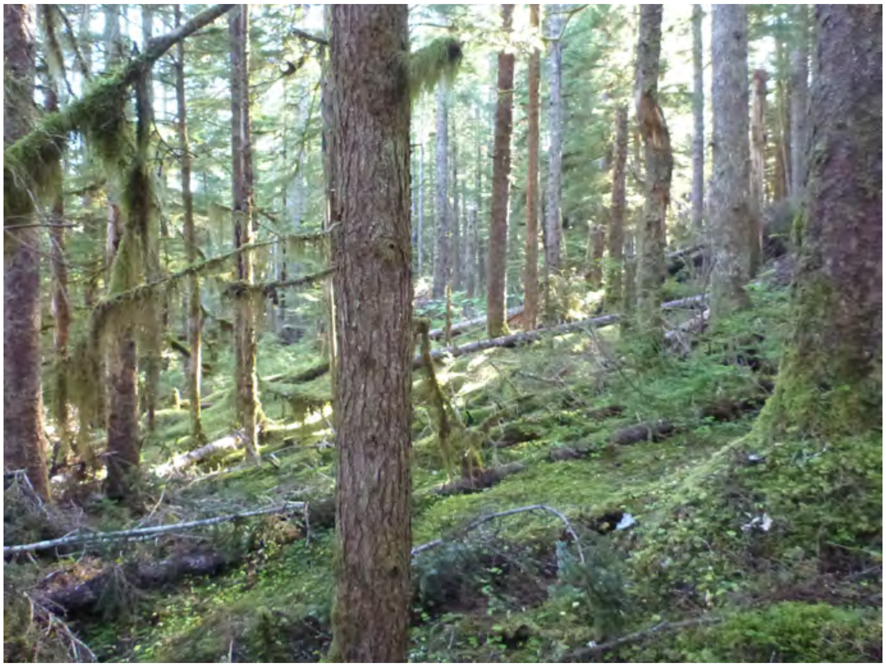

Figure 66.—Typical vegetation in map unit 20TH1.

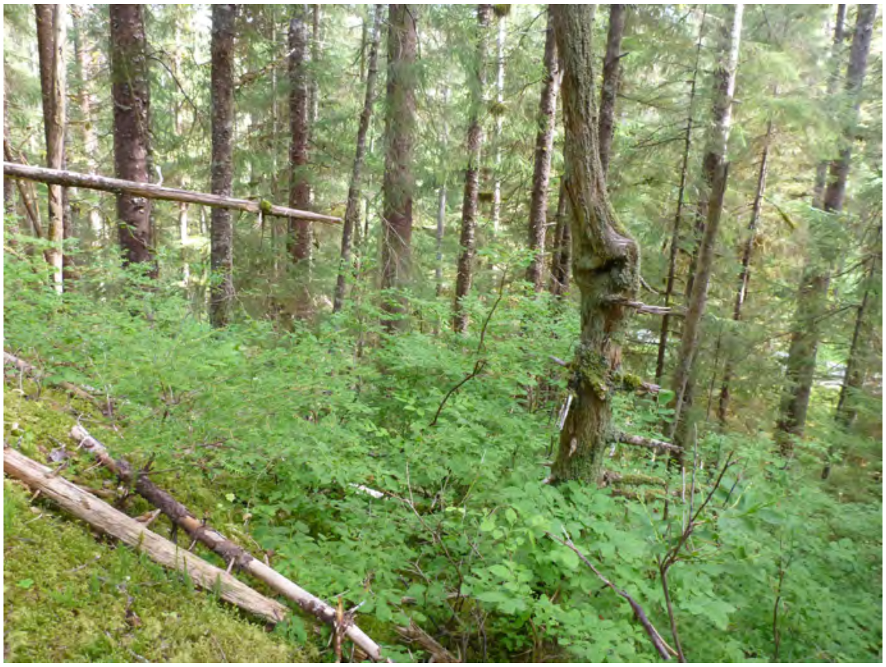

Figure 67.—Typical vegetation in map unit 20TH1.

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: C
Soil classification: Loamy-skeletal, mixed, superactive Typic Humicryepts

Typical Profile
Oi—0 to 9 centimeters; slightly decomposed plant material
A—9 to 27 centimeters; bouldery silt loam
C1—27 to 56 centimeters; extremely bouldery sandy loam
C2—56 to 73 centimeters; extremely gravelly sandy loam
C3—73 to 150 centimeters; extremely gravelly sandy loam

Characteristics of the Lamplugh Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 2 to 5 percent
Parent material: Organic material over outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Moderate (about 4.3 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: About 15 to 25 centimeters (see table 19)
Available water capacity (entire profile): High (about 25.5 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Loamy Plain Wet (F220XY435AK)
Hydric soil status: Yes
Hydrologic soil group: C/D
Soil classification: Fine-loamy, mixed, superactive, nonacid Typic Cryaquepts

Typical Profile
Oe—0 to 15 centimeters; moderately decomposed plant material
Oa—15 to 19 centimeters; highly decomposed plant material
E—19 to 21 centimeters; sandy loam
Bw1—21 to 35 centimeters; sandy loam
Bw2—35 to 54 centimeters; silty clay loam
Cg1—54 to 70 centimeters; very fine sandy loam
Cg2—70 to 150 centimeters; silty clay loam

Characteristics of the Bartlettcove Soil

Setting
Landform: Eolian hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Aspect range: All aspects

Slope range: 10 to 30 percent
Parent material: Eolian sands

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.1 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 11.1 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6e
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy, mixed Entic Haplocryods

Typical Profile
Oe—0 to 12 centimeters; moderately decomposed plant material
E—12 to 14 centimeters; loamy fine sand
Bs—14 to 30 centimeters; loamy fine sand
BC—30 to 45 centimeters; loamy fine sand
C—45 to 150 centimeters; fine sand

Minor Components

Gustavus soils
Percent of map unit: 10 percent
Slope: 0 to 15 percent
Landform: Outwash deltas
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

20UL1—Urban land

Map Unit Setting

Note: This map unit occurs outside the park in the small community of Gustavus. A locator map is not provided in the Appendix.

Landscape: Valleys
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 4.0 to 20 meters
Mean annual precipitation: 850 to 3,231 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Urban land: 90 percent
Dissimilar minor components: 10 percent

Description of Urban Land

Urban land is land covered by pavement, buildings, storage tanks, bridges, and other impervious, human-manufactured surfaces and structures. Pavement is a hard-layered surface of concrete or asphalt that forms a walkway, road, street, highway lane, runway, parking lot, or similar paved area. Urban land is an anthropogenic type of miscellaneous area that does not necessarily represent a permanent condition.

Minor Components

Scidmore soils
Percent of map unit: 10 percent
Slope: 0 to 3 percent
Landform: Pitted outwash plains
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

20UM1—Rock outcrop-Bearisland complex, 60 to 100 percent slopes

Map Unit Setting

Landscape: Mountains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 90 to 350 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 60 percent
Bearisland and similar soils: 25 percent
Dissimilar minor components: 15 percent

Description of Rock Outcrop

Rock outcrop consists of exposures of barren bedrock, other than lava flows, chutes, and rock-lined pits. Some areas are large and only broken by small areas of soil. Most rock outcrops are hard rock, but some are soft rock such as thin beds of weakly cemented shale interbedded with thick beds of strongly cemented sandstone.

Characteristics of the Bearisland Soil

Setting
Landform: Moraines in mountain valleys
Landform position (three-dimensional): Lower third of mountainflank and center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: Southeast
Aspect range: Northeast to southwest (clockwise)
Slope range: 60 to 85 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)

Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 2

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile
Oi—0 to 2 centimeters; slightly decomposed plant material
A—2 to 24 centimeters; very gravelly loamy coarse sand
C—24 to 150 centimeters; very gravelly loamy coarse sand

Minor Components

Skarn soils
Percent of map unit: 10 percent
Slope: 55 to 70 percent
Landform: Mountain slopes
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No

Seclusion soils
Percent of map unit: 5 percent
Slope: 50 to 70 percent
Landform: Escarpments
Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)
Hydric soil status: No

20UM2—Rock outcrop-Bearisland complex, 10 to 60 percent slopes

Map Unit Setting

Landscape: Mountains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 90 to 350 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 60 percent
Bearisland and similar soils: 25 percent
Dissimilar minor components: 15 percent

Description of Rock Outcrop

Rock outcrop consists of exposures of barren bedrock, other than lava flows, chutes, and rock-lined pits. Some areas are large and only broken by small areas of soil. Most rock outcrops are hard rock, but some are soft rock such as thin beds of weakly cemented shale interbedded with thick beds of strongly cemented sandstone.

Characteristics of the Bearisland Soil

Setting

Landform: Moraines in mountain valleys
Landform position (three-dimensional): Lower third of mountainflank and center third of mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Aspect, representative: Southeast
Aspect range: Northeast to southwest (clockwise)
Slope range: 10 to 55 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 2

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Very high
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 3.6 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 7e
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Sandy-skeletal, mixed Typic Cryorthents

Typical Profile

Oi—0 to 2 centimeters; slightly decomposed plant material
A—2 to 24 centimeters; very gravelly loamy coarse sand
C—24 to 150 centimeters; very gravelly loamy coarse sand

Minor Components

Skarn soils

Percent of map unit: 10 percent
Slope: 5 to 50 percent
Landform: Mountain slopes
Ecological site: Maritime Forest Loamy Slopes (F220XY433AK)
Hydric soil status: No

Seclusion soils

Percent of map unit: 5 percent
Slope: 5 to 50 percent

Landform: Escarpments
Ecological site: Maritime Scrub Loamy Escarpments (R220XY446AK)
Hydric soil status: No

20VBA—Typic Cryofluvents-Aquic Dystrocryepts association, flood plains, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 0.0 to 30 meters
Mean annual precipitation: 3,556 to 4,318 millimeters
Mean annual air temperature: 2 to 6 degrees C
Frost-free period: 90 to 116 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Typic Cryofluvents and similar soils: 50 percent
Aquic Dystrocryepts and similar soils: 30 percent
Dissimilar minor components: 20 percent

Characteristics of the Typic Cryofluvents

Setting
Landform: Drainageways on alluvial flats
Landform position (three-dimensional): Talf and dip
Down-slope shape: Linear, concave
Across-slope shape: Convex, linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium and/or glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.5 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Well drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Low (about 8.6 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No
Hydrologic soil group: A
Soil classification: Typic Cryofluvents

Typical Profile
Oe—0 to 10 centimeters; moderately decomposed plant material
A—10 to 13 centimeters; sandy loam
C—13 to 18 centimeters; loamy sand
Ab—18 to 23 centimeters; sandy loam
Bwb—23 to 31 centimeters; loamy sand
C´—31 to 36 centimeters; sand
ABb—36 to 49 centimeters; loamy sand
C´´—49 to 152 centimeters; sand

Characteristics of the Aquic Dystrocryepts

Setting
Landform: Drainageways on alluvial flats
Landform position (three-dimensional): Dip and rise
Down-slope shape: Linear, concave
Across-slope shape: Convex, linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Alluvium and/or glacial outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Somewhat poorly drained
Flooding frequency: Occasional (see table 19)
Ponding frequency: Occasional (see table 19)
Seasonal water table (depth, kind): At the soil surface to 75 centimeters, perched (see table 19)
Available water capacity (entire profile): High (about 25.3 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 3e
Ecological site: Maritime Forest Gravelly Floodplain High (F220XY427AK)
Hydric soil status: No
Hydrologic soil group: B/D
Soil classification: Aquic Dystrocryepts

Typical Profile
Oi—0 to 2 centimeters; slightly decomposed plant material
Oa—2 to 3 centimeters; highly decomposed plant material
A—3 to 18 centimeters; fine sandy loam
Bw—18 to 34 centimeters; fine sandy loam
C1—34 to 50 centimeters; fine sandy loam
C2—50 to 67 centimeters; silt loam
C3—67 to 152 centimeters; silt loam

Minor Components

Typic Cryaquents
Percent of map unit: 10 percent
Slope: 0 to 5 percent

Landform: Drainageways on alluvial flats
Ecological site: Maritime Shrub Gravelly Floodplain Low (R220XY426AK)
Hydric soil status: Yes

Typic Haplocryods
Percent of map unit: 10 percent
Slope: 0 to 5 percent
Landform: Outwash plains, alluvial flats, and beach plains
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

20WD1—Perouse-Scidmore-Perouse, frequently ponded complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Outwash plains (fig. 68)
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast
Elevation: 1.0 to 45 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: 1 to 7 degrees C
Frost-free period: 90 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Perouse and similar soils: 35 percent
Scidmore and similar soils: 35 percent
Perouse, frequently ponded, and similar soils: 20 percent
Dissimilar minor components: 10 percent

Characteristics of the Perouse Soil

Setting
Landform: Outwash deltas
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Outwash

Properties and Qualities
Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

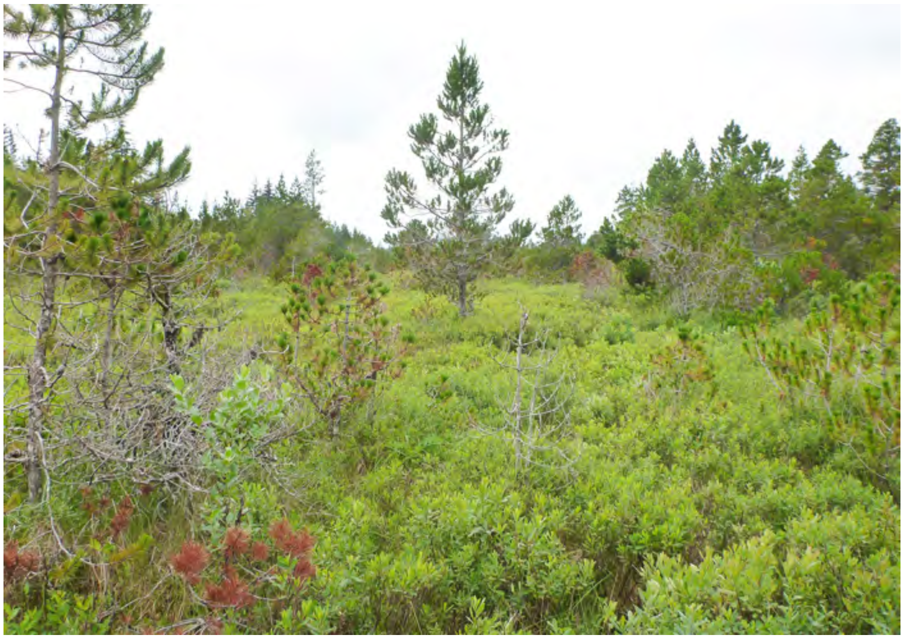

Figure 68.—Typical vegetation in map unit 20WD1.

Interpretive Groups

Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile

Oe—0 to 4 centimeters; mucky peat
Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand
Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

Characteristics of the Scidmore Soil

Setting

Landform: Pitted outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 0 to 5 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Moderately well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 50 to 55 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 6.8 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 6s
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Aquic Haplocryepts

Typical Profile

Oe—0 to 3 centimeters; moderately decomposed plant material
A—3 to 9 centimeters; sandy loam
Bw—9 to 31 centimeters; loamy sand
C—31 to 50 centimeters; sand
Cg—50 to 150 centimeters; coarse sand

Characteristics of the Perouse, Frequently Ponded, Soil

Setting

Landform: Outwash deltas
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 0 to 3 percent
Parent material: Outwash

Properties and Qualities

Depth to restrictive feature: None within 150 centimeters
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: 3

Hydrologic Properties

Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Very poorly drained
Flooding frequency: None
Ponding frequency: Frequent (see table 19)
Seasonal water table (depth, kind): At the soil surface to 5 centimeters, perched (see table 19)
Available water capacity (entire profile): Low (about 9.7 centimeters)

Interpretive Groups

Land capability subclass (nonirrigated): 5w
Ecological site: Maritime Forest Sandy Coastal Plain (F220XY455AK)
Hydric soil status: Yes
Hydrologic soil group: A/D
Soil classification: Sandy, mixed Typic Cryaquents

Typical Profile

Oe—0 to 4 centimeters; mucky peat

Oa—4 to 9 centimeters; muck
Cg1—9 to 40 centimeters; sand
Cg2—40 to 60 centimeters; sand
Cg3—60 to 150 centimeters; sand

Minor Components

Gustavus soils
Percent of map unit: 10 percent
Slope: 2 to 10 percent
Landform: Outwash deltas
Ecological site: Maritime Forest Gravelly Plain (F220XY432AK)
Hydric soil status: No

22HIA—Rock outcrop and Lithic Cryorthents

Map Unit Setting

Landscape: Mountains
Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains
Elevation: 350.0 to 1,200 meters
Mean annual precipitation: 5,207 to 6,223 millimeters
Mean annual air temperature: -1 to 2 degrees C
Frost-free period: 30 to 64 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 80 percent
Lithic Cryorthents and similar soils: 15 percent
Dissimilar minor components: 5 percent

Description of Rock Outcrop

Rock outcrop consists of exposures of barren bedrock, other than lava flows, chutes, and rock-lined pits. Some areas are large and only broken by small areas of soil. Most rock outcrops are hard rock, but some are soft rock such as thin beds of weakly cemented shale interbedded with thick beds of strongly cemented sandstone.

Characteristics of the Lithic Cryorthents

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Mountaintop and upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 36 to 140 percent
Parent material: Colluvium and/or residuum

Properties and Qualities
Depth to restrictive feature: 20 to 51 centimeters to lithic bedrock
Shrink-swell potential: Low (about 1.0 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high

Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 15 to 46 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 2.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 8
Ecological site: Alpine Dwarf Scrub Gravelly Slopes, Bedrock (R222XY356AK)
Hydric soil status: No
Hydrologic soil group: C/D
Soil classification: Lithic Cryorthents

Typical Profile
Oi—0 to 3 centimeters; slightly decomposed plant material
A—3 to 6 centimeters; gravelly loam
C—6 to 36 centimeters; very cobbly sandy loam
R—36 to 200 centimeters; bedrock

Minor Components

Lithic Cryosaprists
Percent of map unit: 5 percent
Slope: 36 to 140 percent
Landform: Depressions on mountain slopes
Ecological site: Alpine Dwarf Scrub Organic Slopes (R222XY352AK)
Hydric soil status: Yes

22SM1—Woodlake-Flapjack complex, 5 to 40 percent slopes

Map Unit Setting

Landscape: Mountains (fig. 69)
Major land resource area (MLRA): 222 - Southern Alaska Coastal Mountains
Elevation: 395.0 to 450 meters
Mean annual precipitation: 850 to 1,815 millimeters
Mean annual air temperature: -5 to 9 degrees C
Frost-free period: 30 to 109 days
Prime farmland classification: Not prime farmland

Map Unit Composition

Woodlake and similar soils: 60 percent
Flapjack and similar soils: 30 percent
Dissimilar minor components: 10 percent

Characteristics of the Woodlake Soil

Setting
Landform: Mountain slopes
Landform position (three-dimensional): Mountaintop
Down-slope shape: Linear
Across-slope shape: Linear
Aspect range: All aspects
Slope range: 20 to 40 percent
Parent material: Colluvium over residuum

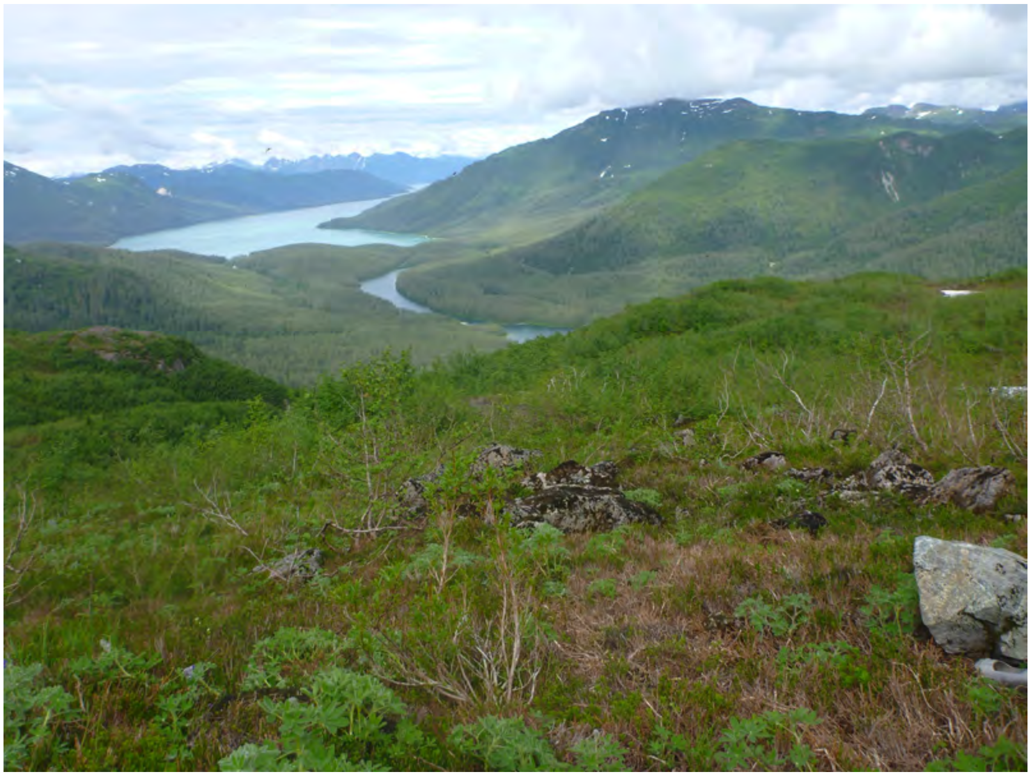

Figure 69.—Mountain slopes in map unit 22SM1.

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.2 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): High
Natural drainage class: Well drained
Flooding frequency: None
Ponding frequency: None
Depth to seasonal water table: Not present within 160 centimeters
Available water capacity (entire profile): Very low (about 4.8 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7e
Ecological site: Alpine Dwarf Scrub Gravelly Slopes, Bedrock (R222XY356AK)
Hydric soil status: No
Hydrologic soil group: B
Soil classification: Loamy-skeletal, mixed, superactive, acid, subgelic Typic Gelorthents

Typical Profile
Oe—0 to 9 centimeters; moderately decomposed plant material
A—9 to 37 centimeters; extremely stony sandy loam
C—37 to 70 centimeters; extremely stony sandy loam
2R—70 to 200 centimeters; bedrock

Characteristics of the Flapjack Soil

Setting
Landform: Swales on mountain slopes
Landform position (three-dimensional): Mountaintop
Down-slope shape: Concave, linear
Across-slope shape: Concave
Aspect range: All aspects
Slope range: 5 to 20 percent
Parent material: Colluvium over residuum

Properties and Qualities
Depth to restrictive feature: 50 to 100 centimeters to lithic bedrock
Shrink-swell potential: Low (about 0.4 LEP)
Salinity maximum based on representative value: Nonsaline
Sodicity maximum: Not sodic
Calcium carbonate equivalent percent: No carbonates

Hydrologic Properties
Slowest capacity to transmit water (K_{sat}): Moderately high
Natural drainage class: Somewhat poorly drained
Flooding frequency: None
Ponding frequency: None
Seasonal water table (depth, kind): About 40 to 50 centimeters, perched (see table 19)
Available water capacity (entire profile): Very low (about 3.0 centimeters)

Interpretive Groups
Land capability subclass (nonirrigated): 7s
Ecological site: Subalpine Dwarf Tree Scrub Gravelly Slopes (F222XY350AK)
Hydric soil status: No
Hydrologic soil group: C/D
Soil classification: Loamy-skeletal, mixed, superactive, acid, subgelic Oxyaquic Gelorthents

Typical Profile
Oe—0 to 4 centimeters; moderately decomposed plant material
A—4 to 20 centimeters; extremely cobbly sandy loam
C—20 to 64 centimeters; extremely gravelly sandy loam
2R—64 to 200 centimeters; bedrock

Minor Components

Rock outcrop
Percent of map unit: 10 percent
Slope: 10 to 60 percent

BR—Rock outcrop

Map Unit Setting

Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains

Map Unit Composition

Rock outcrop: 100 percent

Description of Rock Outcrop

Rock outcrop consists of exposures of barren bedrock, other than lava flows, chutes, and rock-lined pits. Some areas are large and only broken by small areas of soil. Most rock outcrops are hard rock, but some are soft rock such as thin beds of weakly cemented shale interbedded with thick beds of strongly cemented sandstone.

GL2—Glaciers

Map Unit Setting

Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains

Map Unit Composition

Glaciers: 95 percent
Dissimilar minor components: 5 percent

Description of Glaciers

Glaciers are large masses of ice that formed, at least in part, on land by the compaction and recrystallization of snow. They may be moving slowly downslope or outward in all directions by the stress of their own weight, they may be retreating, or they may be stagnant. Rocks and some earthy material may be on the surface or imbedded within the ice. Permanent snowfields are associated with glaciers in some regions. In this map unit, slope ranges from 36 to 140 percent.

Minor Components

Rock outcrop
Percent of map unit: 5 percent
Slope: 36 to 140 percent

P—Pits

Map Unit Setting

Note: This map unit occurs outside the park in the small community of Gustavus. A locator map is not provided in the Appendix.

Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast

Map Unit Composition

Pits: 90 percent
Dissimilar minor components: 10 percent

Description of Pits

Pits are open excavations from which soil and commonly underlying material have been removed (fig. 70). Common kinds of pits are those resulting from mining, gravel operations, and quarries. In this map unit, slope ranges from 0 to 3 percent.

Minor Components

Water
Percent of map unit: 10 percent

RW—Riverwash

Map Unit Setting

Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains

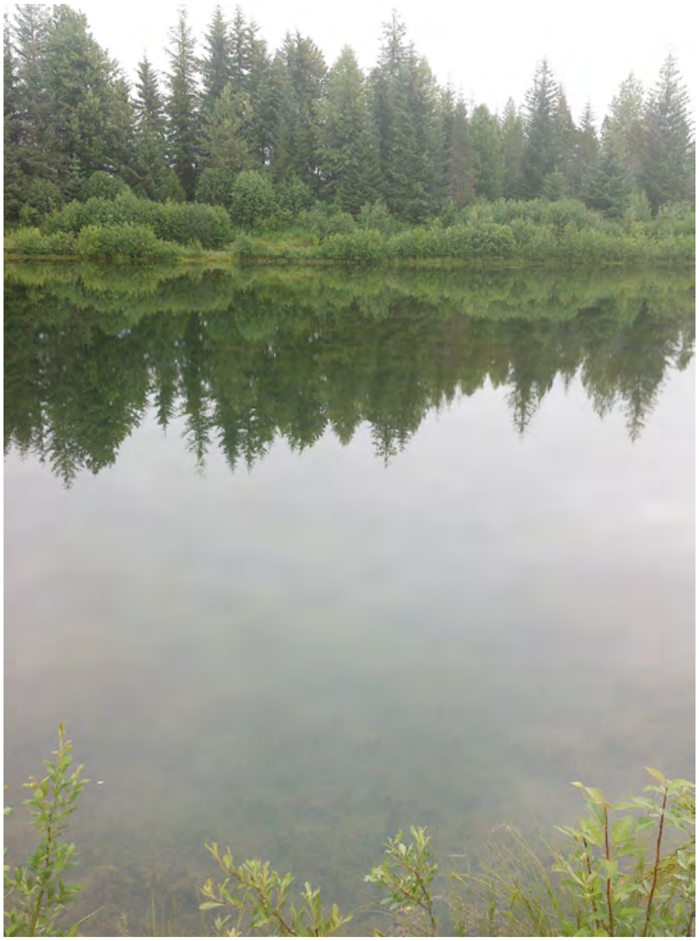

Figure 70.—Typical area of Pits.

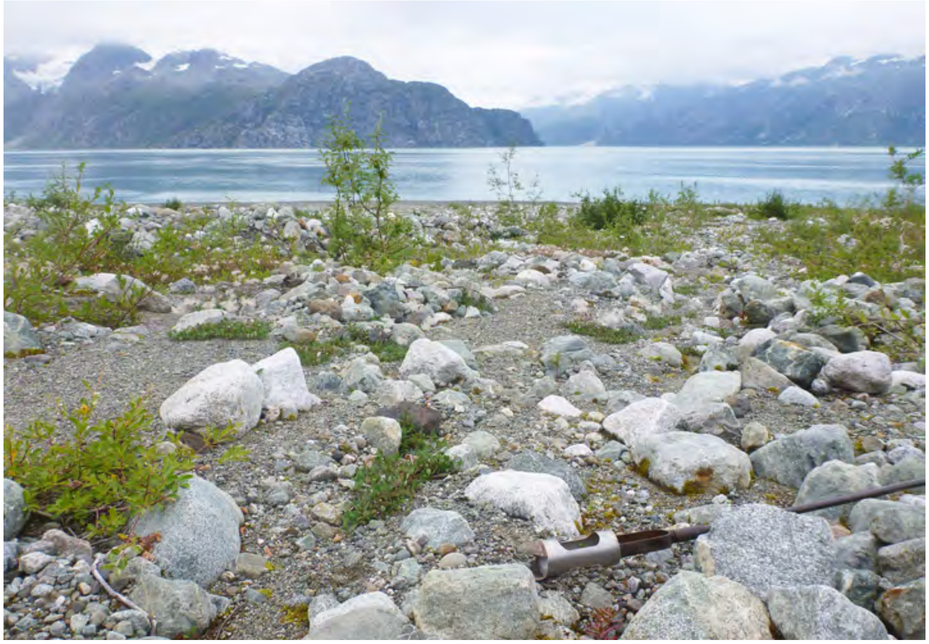

Figure 71.—Typical area of Riverwash.

Map Unit Composition

Riverwash: 90 percent
Dissimilar minor components: 10 percent

Description of Riverwash

Riverwash consists of loose rock fragments of various sizes, ranging from sands to boulders, that are generally well rounded and mostly composed of limestone and dolomite (fig. 71). This material lacks soil development and is extremely sparsely vegetated. It occurs on slopes of 0 to 5 percent.

Minor Components

Water
Percent of map unit: 10 percent

SW—Water, saline

Map Unit Setting

Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains

Map Unit Composition

Water: 95 percent
Dissimilar minor components: 5 percent

Description of Water, Saline

This component consists of areas of salt water, including open ocean, bays, straits, and channels.

Minor Components

Rock outcrop
Percent of map unit: 5 percent
Slope: 30 to 95 percent

W—Water

Map Unit Setting

Major land resource area (MLRA): 220 - Alexander Archipelago-Gulf of Alaska Coast; 222 - Southern Alaska Coastal Mountains

Map Unit Composition

Water: 100 percent

Description of Water

This component consists of areas of water, including ponds, lakes, and rivers.

Ecological Site Descriptions

Plant communities are largely dependent on the soil, climate, topography, aspect, and slope of the landscape, as well as other abiotic features. To better understand these soil-plant interactions and the effects of selected management practices, the Natural Resources Conservation Service classifies forestlands and rangelands into ecological sites.

Landscapes of native vegetation are divided into ecological sites for the purposes of inventory, evaluation, and management. An ecological site, as defined for rangeland, is a distinctive kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation.

An ecological site is the product of all the environmental factors responsible for its development, including parent material, landscape, climate, soils, living organisms, hydrology, fire, and time in place. Ecological site descriptions contain information on each of these environmental factors. Included are brief descriptions of: a) physiographic and climatic features; b) major identifiable plant community types that may occupy the site, including the reference plant community; c) total annual production; d) ecological dynamics of the plant communities; e) soils and their main properties; f) and site interpretations and general management considerations for wildlife, hydrology, recreation, fire, esthetics, and restoration or revegetation.

The reference plant community for a site has evolved under natural ecological processes and disturbances and is considered to be at the highest natural site potential under the current climate. It has developed on the site as a result of all site-forming factors and is best adapted to the unique combination of environmental factors associated with the site. Natural disturbances, such as fire, drought, herbivory, and flooding, were inherent in the development and maintenance of the reference plant community. Plant communities that have been subject to anthropogenic disturbances or physical site deterioration or have been protected from the natural disturbances do not typify the reference state and may exist in a stable or steady state that is different from the reference plant community.

The reference plant community of an ecological site is not a precise assemblage of species for which the proportions are the same from place to place or from year to year. In all plant communities, the productivity and occurrence of individual species vary. Special boundaries of the communities can be recognized by characteristic patterns of species composition, association, and community structure. Generally, one species or group of species dominates the site, and the stability within the natural dynamics or disturbances of the site allows the species to be used as the factor that distinguishes one site from another.

At times, the extent of the less frequently occurring plants may increase on a site or plants not formerly occurring in the reference community may invade the site. The presence or abundance of these plants may fluctuate greatly because of the ability of the plants to adapt to the differences in the microenvironment, weather conditions, soil alterations, or human actions. Using these species for site identification can be misleading; thus they should not be used to differentiate sites.

The following ecological site inventory methods are used in determining the characteristic plant communities of an ecological site:

1. Identification and evaluation of reference and/or relict sites with similar plant communities and associated soils.
2. Interpolation and extrapolation of plant, soil, and climatic data from existing historic reference areas along a continuum to other points on that continuum for which no suitable reference community is available.
3. Evaluation and comparison of the same ecological sites that occur in different areas but that have experienced different levels of disturbance and management. Further comparison is made with areas that are not disturbed.
4. Evaluation and interpretation of research data dealing with the ecology, management, and soils in areas of the plant communities.
5. Review of historical accounts, survey and military records, and botanical literature of the areas.

The initial description of the reference state should be considered an approximation subject to modification as additional knowledge is gained or discovered.

Plant communities change along environmental gradients. When changes in soils, aspect, topography, or moisture conditions are abrupt, the plant community boundaries will be reasonably distinct. Boundaries are less distinct where the plant communities change gradually over wide environmental gradients of relatively uniform soils and topography. Thus, the need for site differentiation may not be readily apparent until the cumulative impact of soil, topography, hydrology, or climate is examined over a broad area. Frequently, such differences are reflected first in production and second in the kinds and proportions of a plant species making up the core of the plant community. In some cases, the boundaries drawn between ecological sites along a continuum of closely related soils and a gradually changing climate are somewhat arbitrary.

The following criteria are used to differentiate one ecological site from another:

1. Significant differences in the species or species groups that are in the characteristic plant community.
2. Significant differences in the relative proportion of species or species groups in the characteristic plant community.
3. Significant differences in the total annual production or site index of the characteristic plant community.
4. Soil factors that determine plant production and composition, the hydrology of the site, and the functioning of the ecological process of the water cycle, mineral cycles, and energy flow.

Differences in kind, proportion, and production of plants are the result of differences in soil, topography, climate, and other environmental factors. Slight variations in these factors are not criteria for site differentiation. Individual environmental factors are frequently associated with significant differences in reference plant communities. For differentiation into a distinct site to occur, the differences in the environmental factors must be great enough to affect the kinds, amounts, and proportions of the plant community.

Forestland is a spatially defined site where the reference community is dominated by a minimum 25 percent tree species overstory canopy cover, as determined by a crown perimeter-vertical projection. The reference community is the climax community that is present today that most resembles the forest conditions prior to European contact. It developed with natural disturbances such as drought, fire, and insects. Several other plant communities may be present during the seral stages of development. Vegetation on forestland provides many habitat components, assists in controlling soil erosion, is suitable for grazing or browsing by wildlife, and offers scenic and recreational opportunities. Forestland is environmentally and economically important. For more information about NRCS national forestry policies, see the NRCS “National Forestry Manual” (online at https://directives.sc.egov.usda.gov/).

The reference community for a rangeland ecological site does not have the potential to produce a minimum 25 percent tree species overstory canopy cover. Several other plant communities may be present during phases of development or altered conditions. Vegetation on rangeland provides many habitat components, assists in controlling soil erosion, is suitable for grazing or browsing by wildlife and domestic animals, and offers scenic and recreational opportunities. Rangeland is environmentally and economically important.

Ecological Site Tables

Table 3—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID. This table summarizes the climatic features by map unit symbol and soil name and percent of map unit with the correlated ecological site name and number. Climatic features include slope, elevation, and MAP (mean annual precipitation).

Table 4—Ecological Site-Soil Correlation. This table lists the map unit symbol, component percent and soil name (component) with the ecological site name, ecological site type (Forestland or Rangeland), and ecological site ID (ecological site number). Approved ecological site descriptions are available online at EDIT (nmsu.edu). These descriptions are dynamic documents that are constantly updated as new research and data is gained; thus, the online version, even after approval, will be the most recent version of the descriptions.

Ecological Sites of Glacier Bay National Park

F220XY350AK—Subalpine Woodlands Gravelly Dry Slopes

This site occurs on mountain slopes at the highest subalpine band before the true alpine zone (fig. 72). It has a harsh climate where trees are commonly stunted and grow in patches. The soils are gravelly Spodosols that formed in colluvium over weathered residuum. They are well drained or moderately well drained and dry for much of the growing season. They are shallow; bedrock typically is within 20 inches of the soil surface.

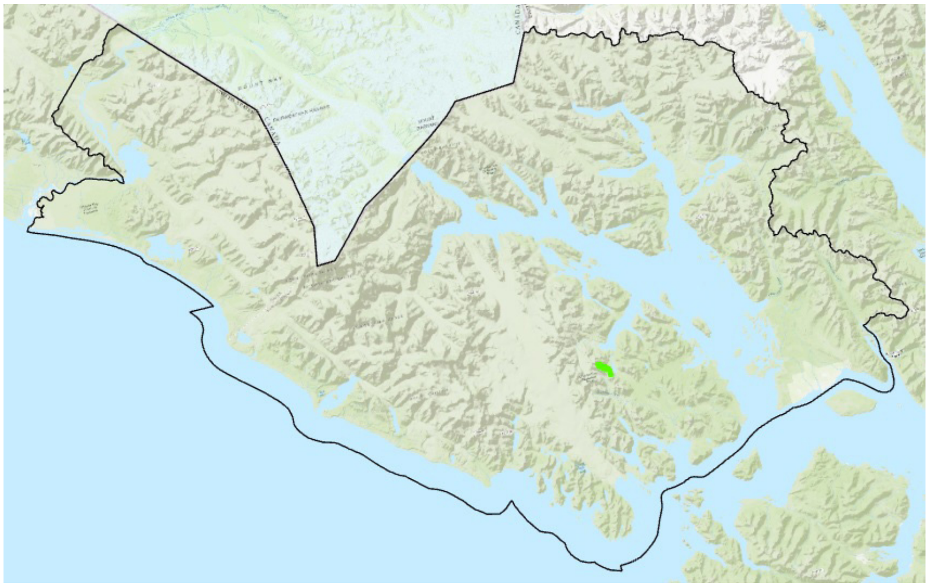

Figure 72.—Location (in bright green) of Ecological Site F220XY350AK (Subalpine Woodlands Gravelly Dry Slopes) in the survey area.

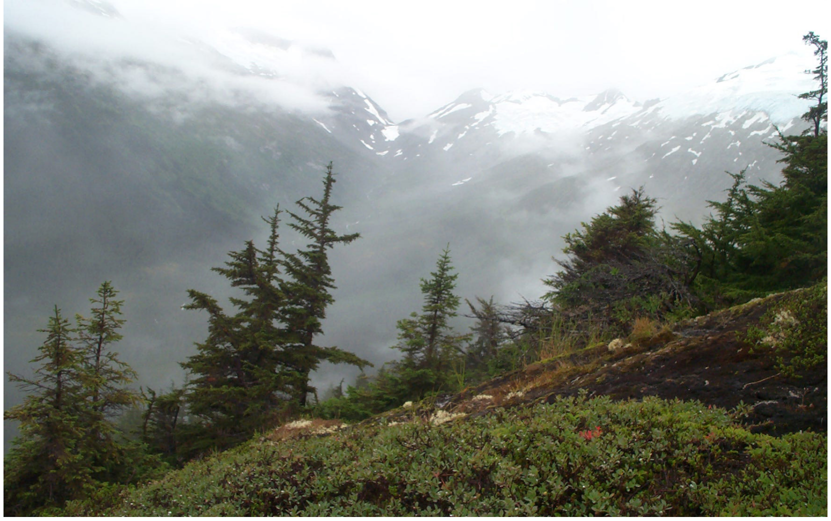

Figure 73.—The reference plant community for Ecological Site F220XY350AK (Subalpine Woodlands Gravelly Dry Slopes).

The reference plant community is a krummholz woodland, dominated by coniferous trees and ericaceous dwarf shrubs (fig. 73). Mountain hemlock (*Tsuga mertensiana*) is the dominant tree. The understory vegetation is a mixture of species common in subalpine and alpine plant communities, including western moss heather (*Cassiope mertensiana*), Alaska bellheather (*Harrimanella stellariana*), black crowberry (*Empetrum nigrum*), strawberryleaf raspberry (*Rubus pedatus*), and reindeer lichen (*Cladina* spp.). The primary disturbance factors that maintain this plant community are exposure to cold temperatures, wind, and avalanches.

F220XY427AK—Maritime Forest Gravelly Floodplain High

This site occurs on high flood plains adjacent to a river or stream channel in river valleys and coastal plains (fig. 74). The high flood plains are rarely to frequently flooded. They may include some closed depressions where water ponds on the surface for long durations. The soils are stratified silt loam to loamy sand and commonly have lenses of gravel and sandier textures in the deeper horizons. The soils are mainly moderately well drained or well drained; they are very poor drained in

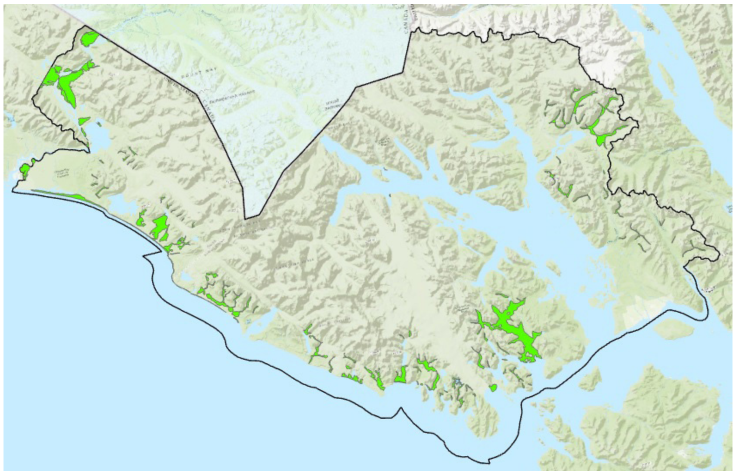

Figure 74.—Location (in bright green) of Ecological Site F220XY427AK (Maritime Forest Gravelly Floodplain High) in the survey area.

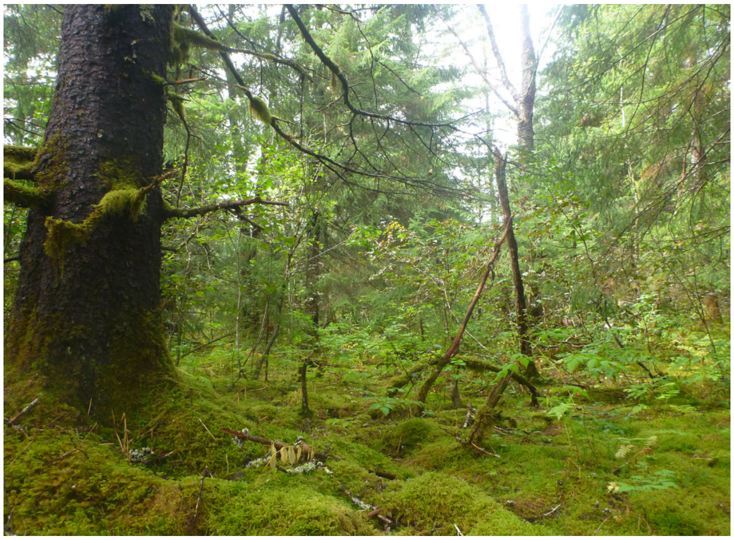

Figure 75.—The reference plant community for Ecological Site F220XY427AK (Maritime Forest Gravelly Floodplain High).

closed depressions. Areas in relatively small, closed depressions commonly have very deep peat deposits as a result of long-duration ponding.

The plant reference state is composed of three communities that reflect a disturbance regime of occasional, high-intensity flooding (fig. 75). Following severe flood events, the community typically is a tall shrub community with abundant herbaceous understory plants. In the absence of severe flooding, the abundance of balsam poplar (*Populus balsamifera*) increases and the community resembles an open forest. If flooding becomes even less frequent, Sitka spruce (*Picea sitchensis*) becomes dominant and understory shrubs and forbs are largely displaced by moss species.

F220XY430AK—Maritime Forest Sandy Plain Alluvial Fan

This site occurs on alluvial fans along the boundary with mountains (fig. 76). Alluvial fans are depositional landforms with complex microfeatures. They develop as sediment is transported from the mountains and deposited in a broad fan shape at the

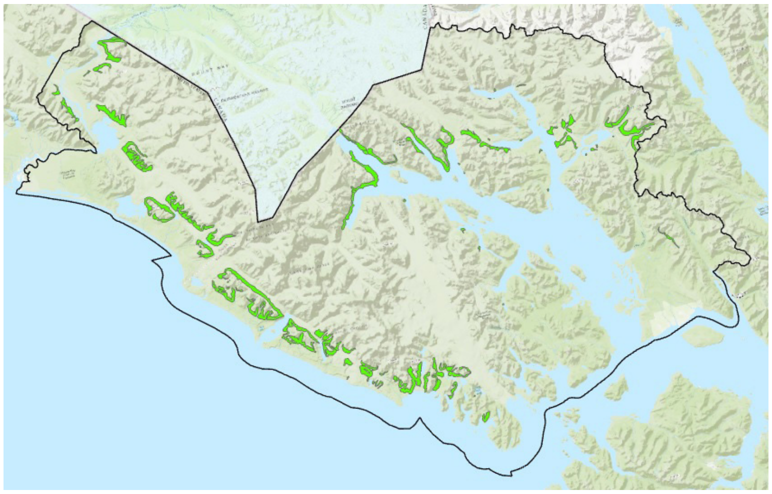

Figure 76.—Location (in bright green) of Ecological Site F220XY430AK (Maritime Forest Sandy Plain Alluvial Fan) in the survey area.

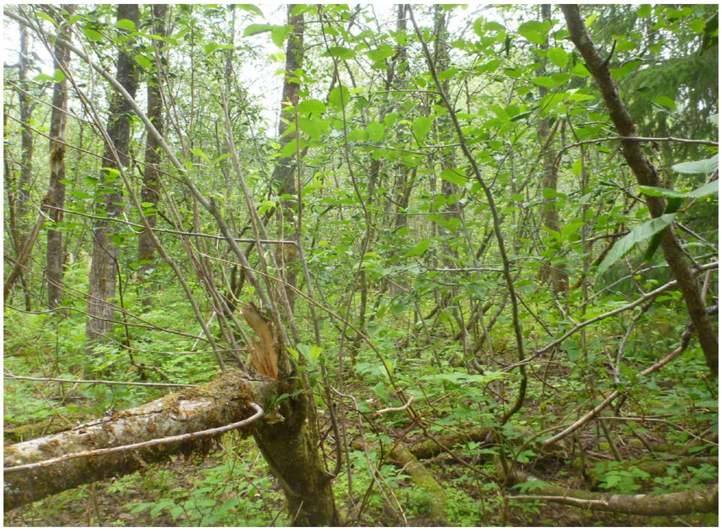

Figure 77.—The reference plant community for Ecological Site F220XY430AK (Maritime Forest Sandy Plain Alluvial Fan).

edge of the plains. On this site, slopes are typically less than 25 percent. The soils are deep sandy loam with high gravel content (about 40 to 60 percent, by volume). Soil drainage is variable, but the soils are typically moderately well drained or well drained.

The most common plant community on this site is an open tall shrub community which can be dominated by a number of different species, including Sitka alder (*Alnus viridis* ssp. *sinuata*), Sitka willow (*Salix sitchensis*), and russet buffaloberry (*Shepherdia canadensis*) (fig. 77). Given sufficient time, balsam poplar (*Populus balsamifera*) can establish on the site, creating an open broadleaf forest community with understory species such as claspleaf twistedstalk (*Streptopus amplexifolius*) and spreading woodfern (*Dryopteris expansa*). Large sediment-deposition events can return the forest to a shrub-dominated community. Drummond's mountain-avens (*Dryas drummondii*) is a major pioneer species on this site following initial alluvial fan deposition.

F220XY432AK—Maritime Forest Gravelly Plain

This site occurs on outwash plains and deltas as well as on gravelly till plains and eolian hills in glacial valleys (fig. 78). Slopes are typically less than 20 percent. The

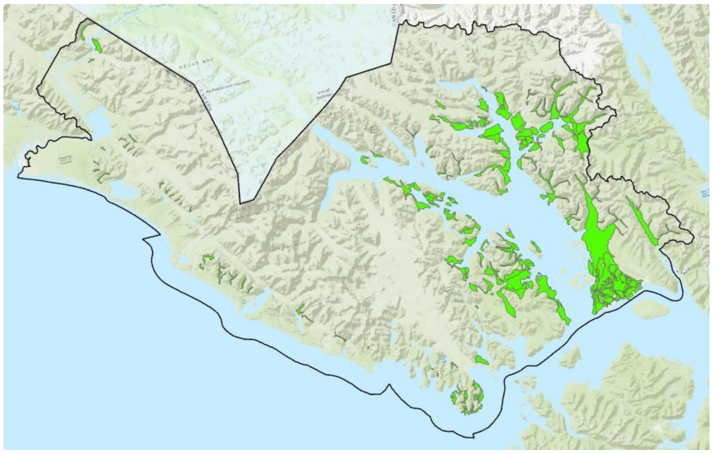

Figure 78.—Location (in bright green) of Ecological Site F220XY432AK (Maritime Forest Gravelly Plain) in the survey area.

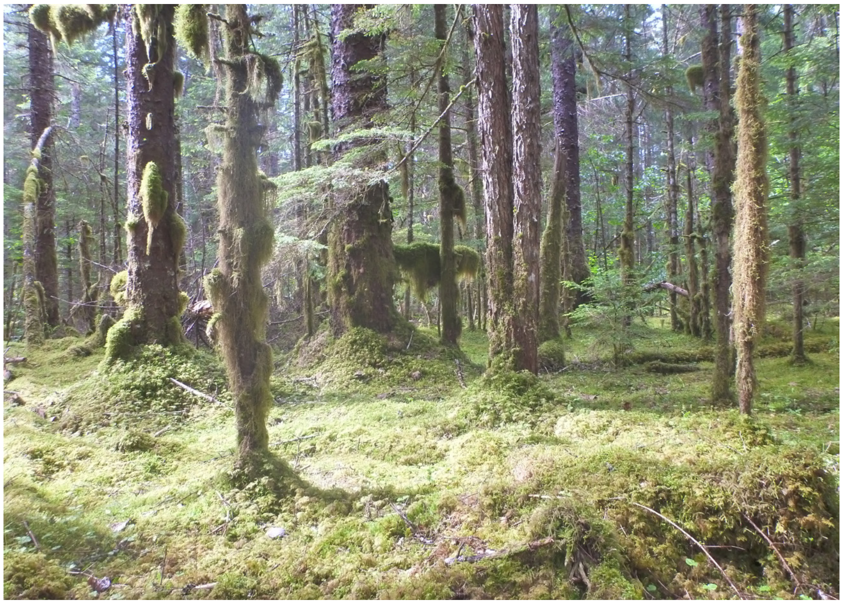

Figure 79.—The reference plant community for Ecological Site F220XY432AK (Maritime Forest Gravelly Plain).

soils are deep and well drained or moderately well drained. They are relatively coarse in texture, typically fine sandy loam or coarser, and have less than 45 percent rock fragments, by volume.

This site supports several plant communities representing natural succession (fig. 79). Following deglaciation, a dwarf shrub community establishes on the site. It includes Drummond's mountain-avens (*Dryas drummondii*), Sitka willow (*Salix sitchensis*), and Ceratadon moss. Over time, this community is replaced by a closed tall-shrub community dominated by Sitka alder (*Alnus viridis* ssp. *sinuata*), Sitka willow, common ladyfern (*Athyrium felix-femina*), and spreading woodfern (*Dryopteris expansa*). Balsam poplar (*Populus balsamifera*) can establish on the site, creating an open broadleaf forest community, followed by Sitka spruce (*Picea sitchensis*) and an open mixed-wood forest. After several decades, Sitka spruce becomes the dominant overstory species in an open needleleaf forest. At this stage, feather moss becomes the dominant ground cover and common understory species include oval-leaf blueberry (*Vaccinium ovalifolium*), strawberryleaf raspberry (*Rubus pedatus*), sidebells wintergreen (*Orthilia secunda*), heartleaf twayblade (*Listera cordata*), and western rattlesnake plantain (*Goodyera oblongifolia*). Common mosses include splendid feather moss (*Hylocomium splendens*), Schreber's big red stem moss (*Pleurozium schreberi*), and goose neck moss (*Rhytidiadelphu*s spp.). In some cases, western hemlock (*Tsuga heterophylla*) can co-dominate the mature forest overstory. Windthrow reduces the cover of tree species on this site and sets back natural succession to a prior community, usually in small patches.

F220XY433AK—Maritime Forest Loamy Slopes

This site occurs on the lower and middle third of mountain slopes and hills (fig. 80). Slopes typically range from 20 to 75 percent. The soils formed in moderately deep colluvium or deep outwash deposits. Where present, bedrock is greater than 20 inches below the soil surface. These soils are well drained, have about 40 to 60 percent rock fragments, by volume, and have coarse textures ranging from sandy loam to coarse loamy sand.

This site supports several plant communities representing natural succession (fig. 81). Following deglaciation, a dwarf shrub community establishes on the site. It

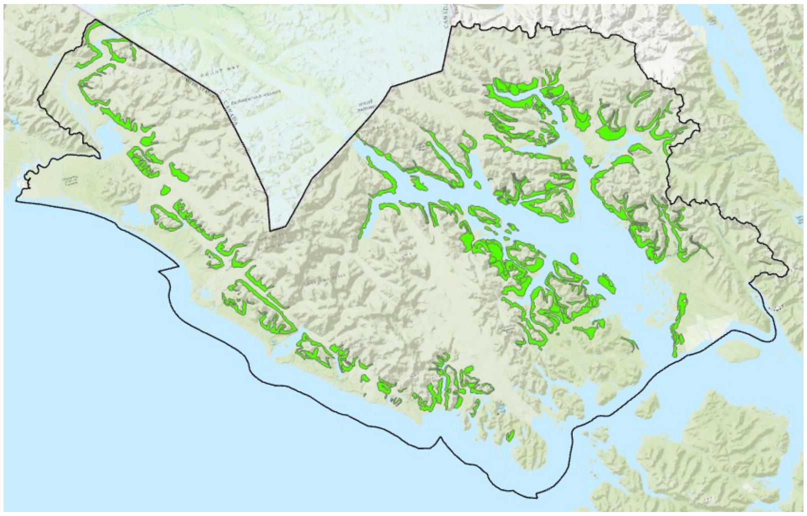

Figure 80.—Location (in bright green) of Ecological Site F220XY433AK (Maritime Forest Loamy Slopes) in the survey area.

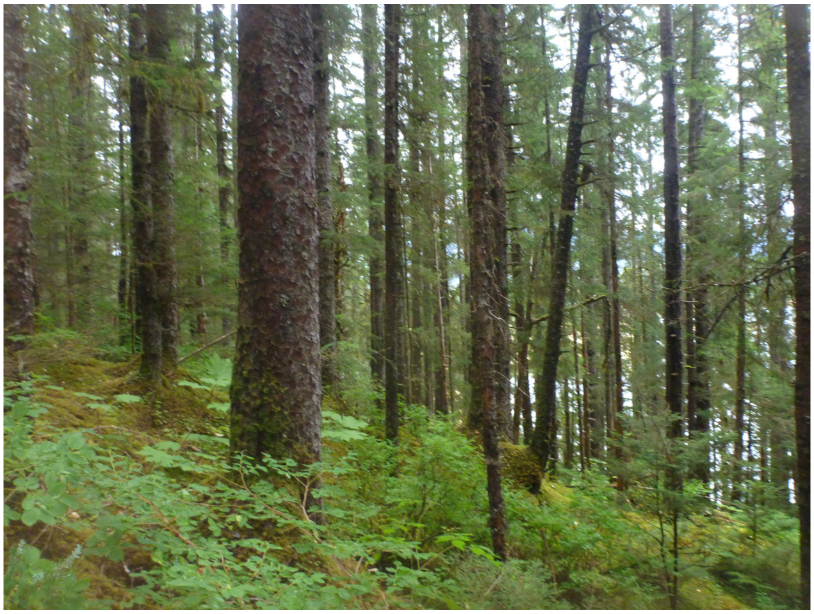

Figure 81.—The reference plant community for Ecological Site F220XY433AK (Maritime Forest Loamy Slopes).

includes Drummond's mountain-avens (*Dryas drummondii*) and russet buffaloberry (*Shepherdia canadensis*). Over time, this community is replaced by a closed tall-shrub community dominated by Sitka alder (*Alnus viridis* ssp. *sinuata*), Sitka willow (*Salix sitchensis*), common ladyfern (*Athyrium felix-femina*), and spreading woodfern (*Dryopteris expansa*). Balsam poplar (*Populus balsamifera*) establishes next on the site, creating an open broadleaf forest community, followed by Sitka spruce (*Picea sitchensis*) and an open mixed-wood forest. After several decades, Sitka spruce becomes the dominant overstory species in an open needleleaf forest. At this stage, feather moss becomes the dominant ground cover with Sitka alder as the most common understory species. Common mosses include splendid feather moss (*Hylocomium splendens*), Schreber's big red stem moss (*Pleurozium schreberi*), and goose neck moss (*Rhytidiadelphus* spp.).

F220XY434AK—Maritime Woodland Peat Plain Depression

This site occurs in wet depressions on glaciated plains or lower mountain slopes where organic soils form (fig. 82). Slopes are typically less than 5 percent. Although not subject to flooding or ponding, the soils are poorly drained or very poorly drained. The water table is typically within 9 inches of the soil surface throughout the growing season. These soils are acidic, with a pH ranging from 3.2 to 4.7.

This wetland site supports a dwarf tree scrub woodland distinguished by sparse, stunted lodgepole pine (*Pinus contorta*) with very low cover and productivity (fig. 83). Other common species include black crowberry (*Empetrum nigrum*), tufted bulrush (*Trichophorum cespitosum*), longawn sedge (*Carex macrochaeta*) and other *Carex* species, and *Sphagnum* mosses. Sometimes lodgepole pine is absent from the community.

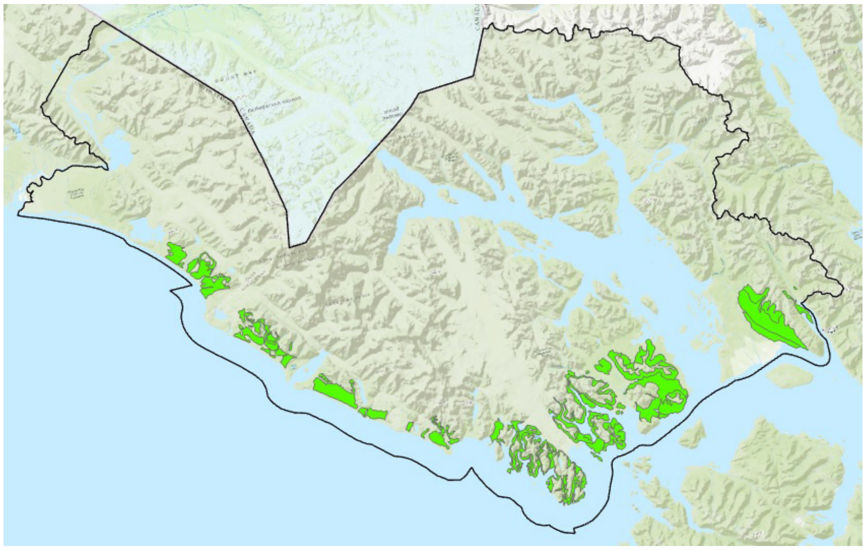

Figure 82.—Location (in bright green) of Ecological Site F220XY434AK (Maritime Woodland Peat Plain Depression) in the survey area.

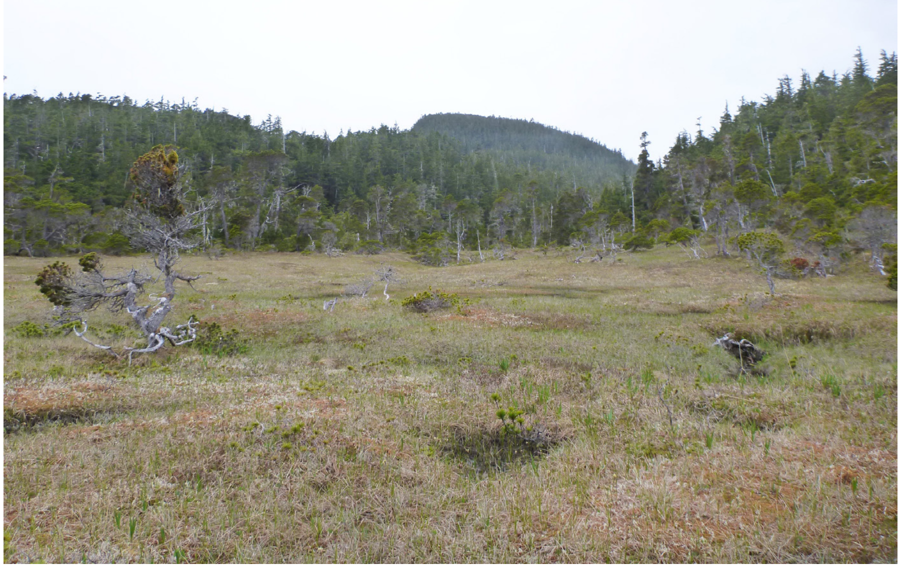

Figure 83.—The reference plant community for Ecological Site F220XY434AK (Maritime Woodland Peat Plain Depression).

F220XY435AK—Maritime Forest Loamy Plain Wet

This site occurs on poorly drained till plains with slopes of less than 8 percent (fig. 84). The water table is typically 6 to 12 inches below the soil surface throughout the growing season. The soils are deep sandy loam and fine sandy loam and have less than 25 percent rock fragments, by volume. The soil surface is capped with an organic horizon about 7 to 14 inches thick.

This site supports three communities that respond to hydrologic changes as a result of human activities or natural events affecting soil moisture (fig. 85). Where soils are relatively wet for several years, the site supports an open tall-scrub community dominated by Sitka alder (*Alnus viridis* ssp. *sinuata*). When soils are drier, balsam poplar (*Populus balsamifera*), Sitka spruce (*Picea sitchensis*), and salmonberry (*Rubus spectabilis*) establish in higher quantities, creating an open mixed-forest

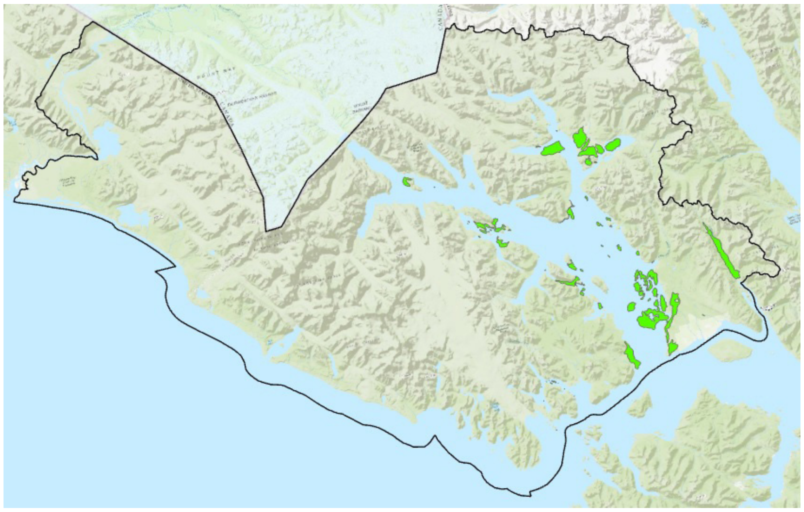

Figure 84.—Location (in bright green) of Ecological Site F220XY435AK (Maritime Forest Loamy Plain Wet) in the survey area.

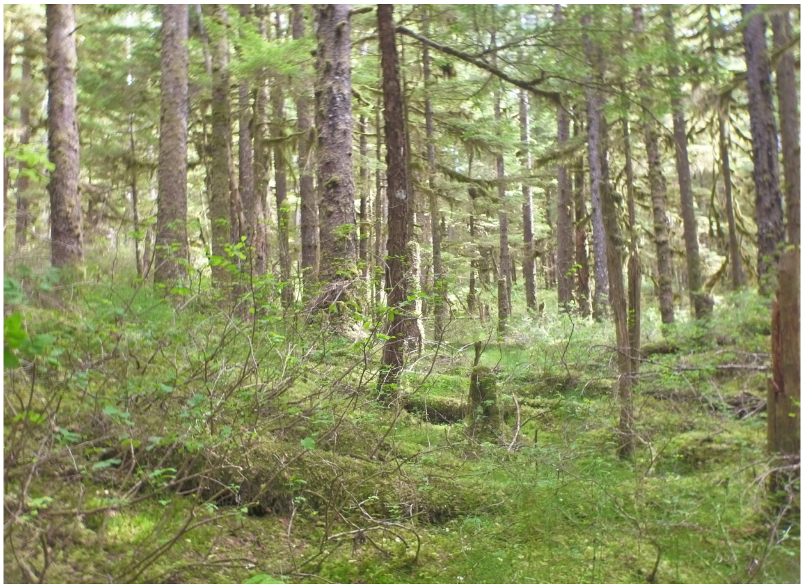

Figure 85.—The reference plant community for Ecological Site F220XY435AK (Maritime Forest Loamy Plain Wet).

community. With prolonged dry conditions, Sitka spruce and western hemlock (*Tsuga heterophylla*) dominate the overstory and mosses dominate the understory, including splendid feather moss (*Hylocomium splendens*), Schreber's big red stem moss (*Pleurozium schreberi*), and goose neck moss (*Rhytidiadelphus* spp.). This open needleleaf forest commonly retains Sitka alder as a common understory species.

F220XY439AK—Maritime Woodland Peat Slopes

This site is associated with muskegs on mountain slopes (fig. 86). Slopes range from 25 to 50 percent. The muskegs are in concave positions that collect water runoff and throughflow. The soils are somewhat poorly drained. They have a water table about 10 to 14 inches below the soil surface throughout the growing season.

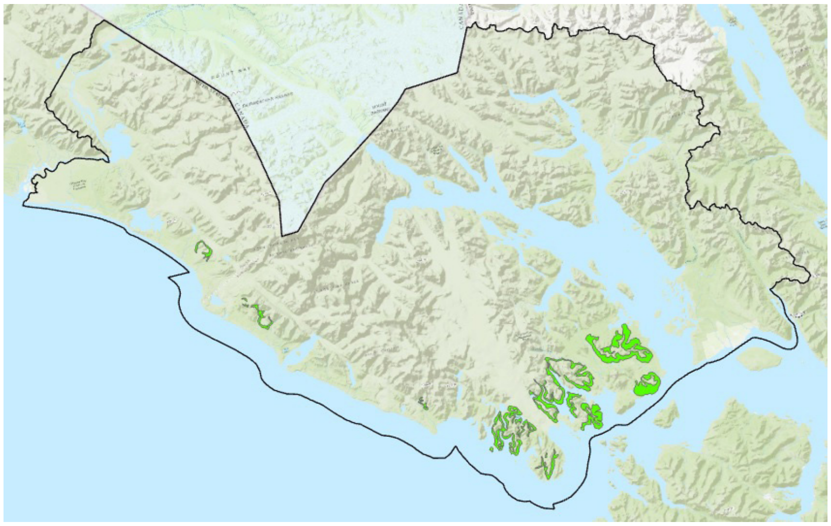

Figure 86.—Location (in bright green) of Ecological Site F220XY439AK (Maritime Woodland Peat Slopes) in the survey area.

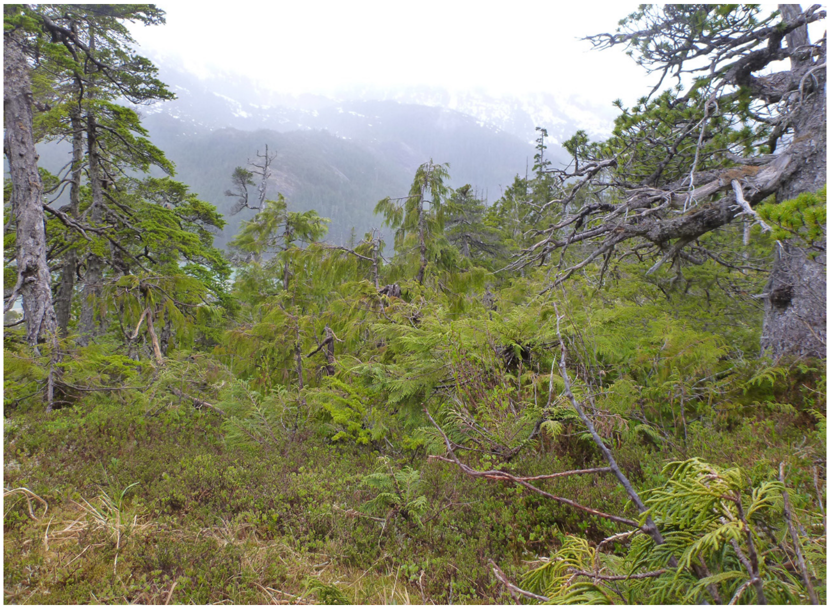

Figure 87.—The reference plant community for Ecological Site F220XY439AK (Maritime Woodland Peat Slopes).

The reference community phase is a needleleaf woodland primarily composed of stunted Alaska cedar (*Callitropsis nootkatensis*), mountain hemlock (*Tsuga mertensiana*), and, in some cases, lodgepole pine (*Pinus contorta*) (fig. 87). The understory is a diverse mixture of various facultative and obligate wetland species. Common species include black crowberry (*Empetrum nigrum*), Aleutian mountainheath (*Phyllodoce aleutica*), goose neck moss (*Rhytidiadelphus* spp.), splendid feather moss (*Hylocomium splendens*), and *Sphagnum* species.

F220XY440AK—Maritime Forest Loamy Plains

This site occurs in convex areas of glaciated plains (fig. 88). Slopes are less than 15 percent. The soils formed in residuum and are shallow, with bedrock typically about

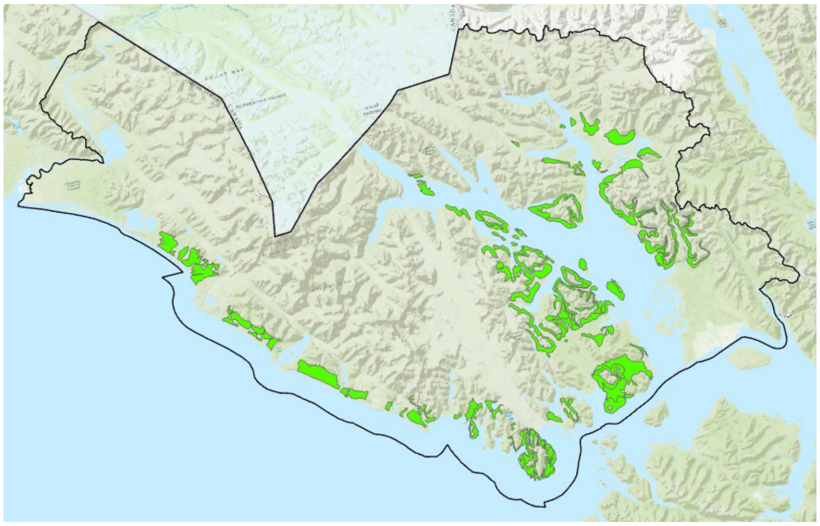

Figure 88.—Location (in bright green) of Ecological Site F220XY440AK (Maritime Forest Loamy Plains) in the survey area.

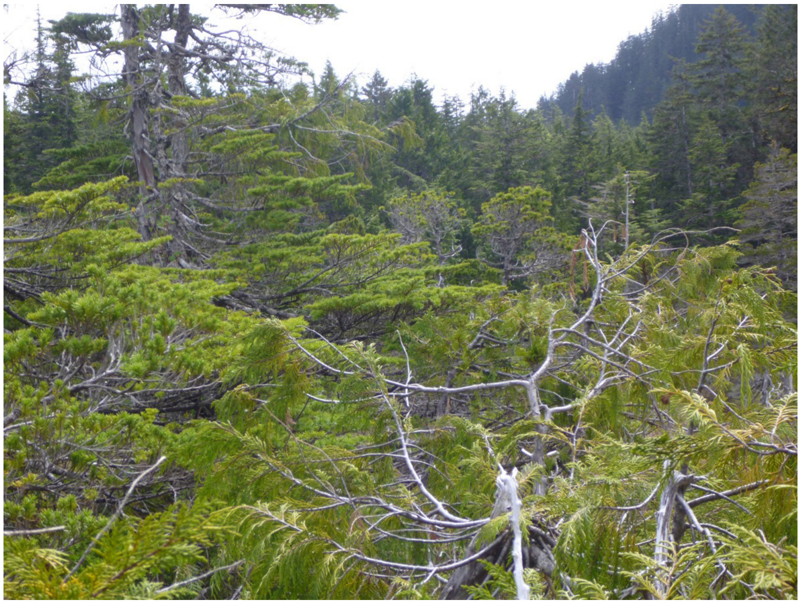

Figure 89.—The reference plant community for Ecological Site F220XY440AK (Maritime Forest Loamy Plains).

12 inches below the soil surface. They are well drained sandy loam and have relatively few rock fragments. These soils restrict root growth and development and are the primary driver of plant community composition on this site.

This site supports an open needleleaf forest community comprised of stunted Alaska cedar (*Callitropsis nootkatensis*), mountain hemlock (*Tsuga mertensiana*), and lodgepole pine (*Pinus contorta*) (fig. 89). The understory consists of diverse ericaceous shrubs, forbs, and moss. Common species include black crowberry (*Empetrum nigrum*), Aleutian mountainheath (*Phyllodoce aleutica*), bog blueberry (*Vaccinium uliginosum*), deercabbage (*Nephrophyllidium crista-galli*), Schreber's big red stem moss (*Pleurozium schreberi*), and *Sphagnum* species.

F220XY441AK—Maritime Forest Gravelly Slopes

This site occurs on mountain and hill slopes (fig. 90). Slopes mostly range from 15 to 70 percent. The soils formed in shallow to moderately deep colluvium over residuum. Bedrock is typically about 20 to 40 inches below the soil surface. These soils are well drained silt loam and have 0 to 40 percent rock fragments, by volume.

This site supports a closed needleleaf forest consisting of mature mixed conifers with a moss-covered soil surface (fig. 91). Dominant species include Sitka spruce (*Picea sitchensis*), mountain hemlock (*Tsuga mertensiana)*, and western hemlock (*Tsuga heterophylla*). Common understory species include oval-leaf blueberry (*Vaccinium ovalifolium*), devilsclub (*Oplopanax horridus*), strawberryleaf raspberry (*Rubus pedatus*), spreading woodfern (*Dryopteris expansa*), fernleaf goldthread (*Coptis aspleniifolia*), splendid feather moss (*Hylocomium splendens*), dicranum moss (*Dicranum* spp.), Schreber's big red stem moss (*Pleurozium schreberi*), and goose neck moss (*Rhytidiadelphus* spp.). In some cases, Alaska cedar (*Callitropsis nootkatensis*) can co-dominate on this site. Treethrow may reduce the proportion of western hemlock on the site and increase the diversity and productivity of understory species in open patches.

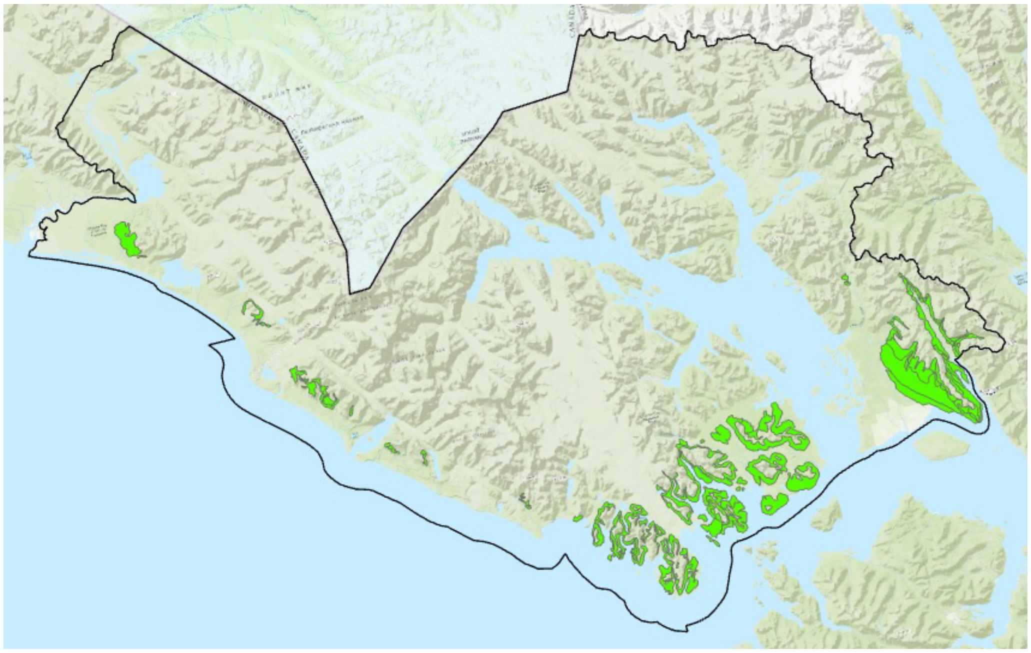

Figure 90.—Location (in bright green) of Ecological Site F220XY441AK (Maritime Forest Gravelly Slopes) in the survey area.

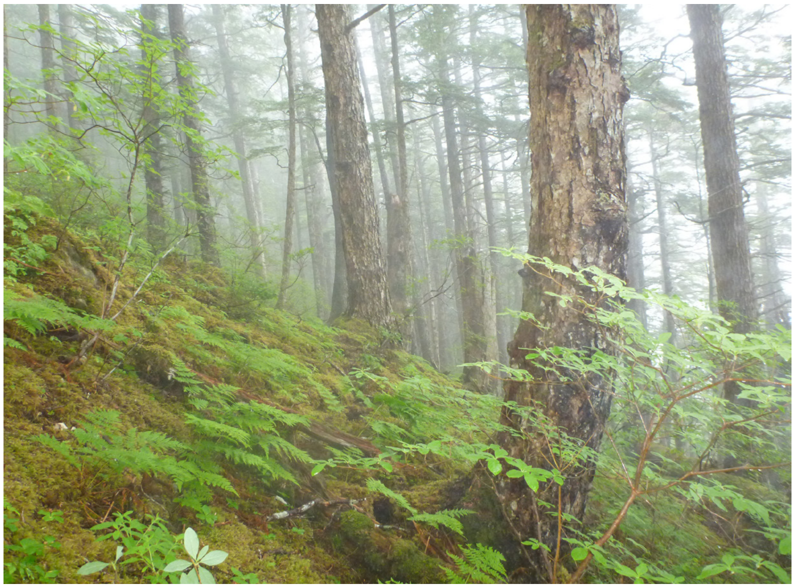

Figure 91.—The reference plant community for Ecological Site F220XY441AK (Maritime Forest Gravelly Slopes).

F220XY442AK—Maritime Forest Loamy Slopes Steep

This site occurs on concave swales of mountain and hill slopes (fig. 92). Slopes range mostly from 15 to 70 percent. The soils formed in shallow to moderately deep colluvium over residuum. They are silt loam, are moderately well drained to somewhat poorly drained, and have a water table within 14 to 26 inches of the soil surface throughout the growing season. Bedrock is typically about 20 to 40 inches below the soil surface. These soils typically have less than 20 percent rock fragments. They are capped with an organic horizon about 6 to 14 inches thick.

This site supports an open needleleaf forest consisting of mature mixed conifers with a moss-covered soil surface (fig. 93). Dominant species include Alaska cedar (*Callitropsis nootkatensis*), Sitka spruce (*Picea sitchensis*), mountain hemlock (*Tsuga*

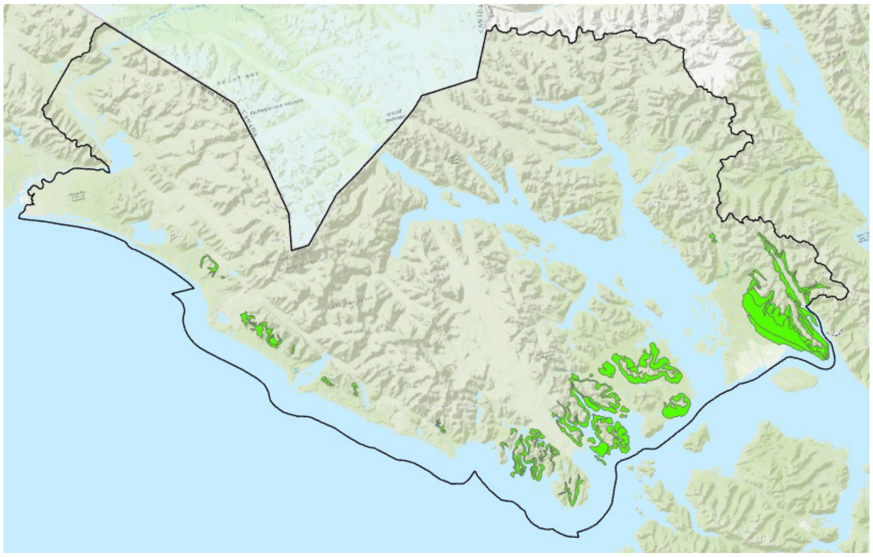

Figure 92.—Location (in bright green) of Ecological Site F220XY442AK (Maritime Forest Loamy Slopes Steep) in the survey area.

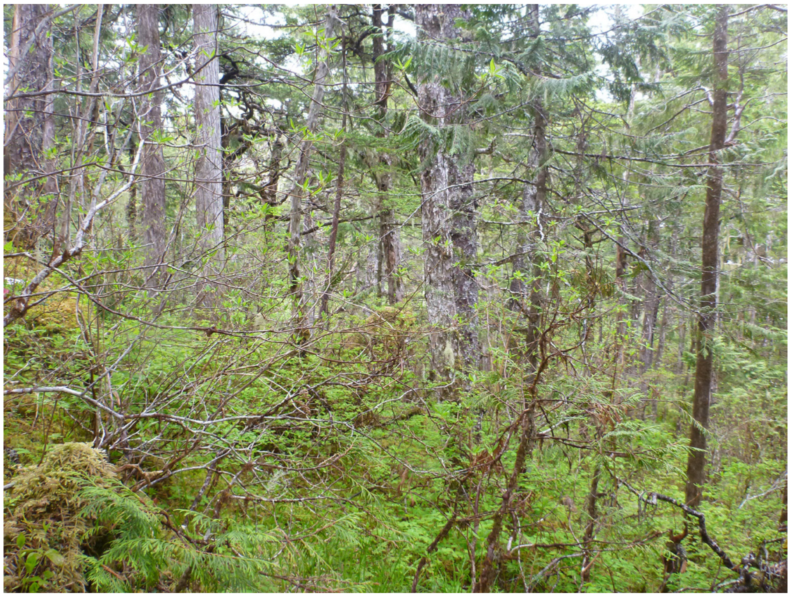

Figure 93.—The reference plant community for Ecological Site F220XY442AK (Maritime Forest Loamy Slopes Steep).

mertensiana), and western hemlock (*Tsuga heterophylla*). Common understory species include oval-leaf blueberry (*Vaccinium ovalifolium*), devilsclub (*Oplopanax horridus*), strawberryleaf raspberry (*Rubus pedatus*), rusty menziesia (*Menziesia ferruginea*), fernleaf goldthread (*Coptis aspleniifolia*), splendid feather moss (*Hylocomium splendens*), dicranum moss (*Dicranum* spp.), Schreber's big red stem moss (*Pleurozium schreberi*), and goose neck moss (*Rhytidiadelphus* spp.).

F220XY447AK—Maritime Forest Loamy Organic Slopes

This site occurs in concave swales of mountain and hill slopes (fig. 94). Slopes mostly range from 5 to 35 percent. The soils formed in deep organic deposits over

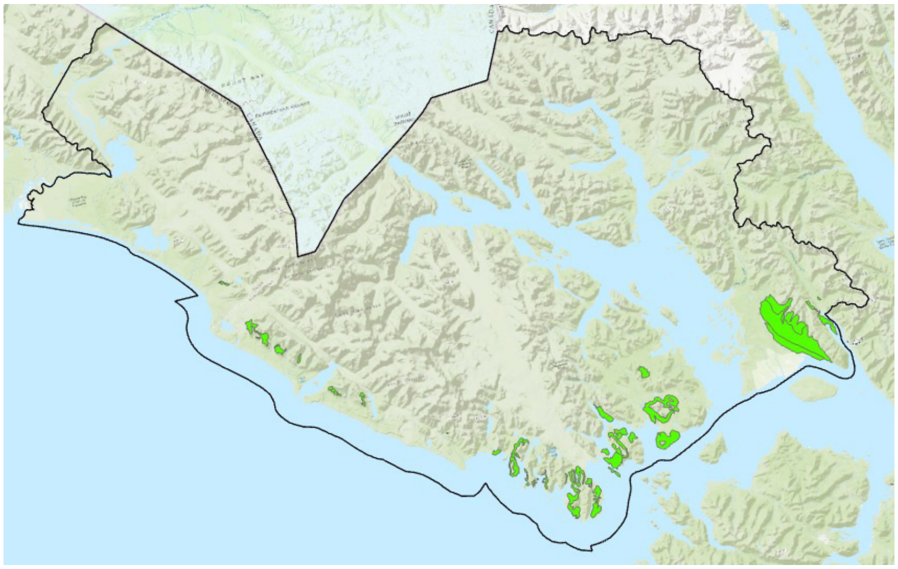

Figure 94.—Location (in bright green) of Ecological Site F220XY447AK (Maritime Forest Loamy Organic Slopes) in the survey area.

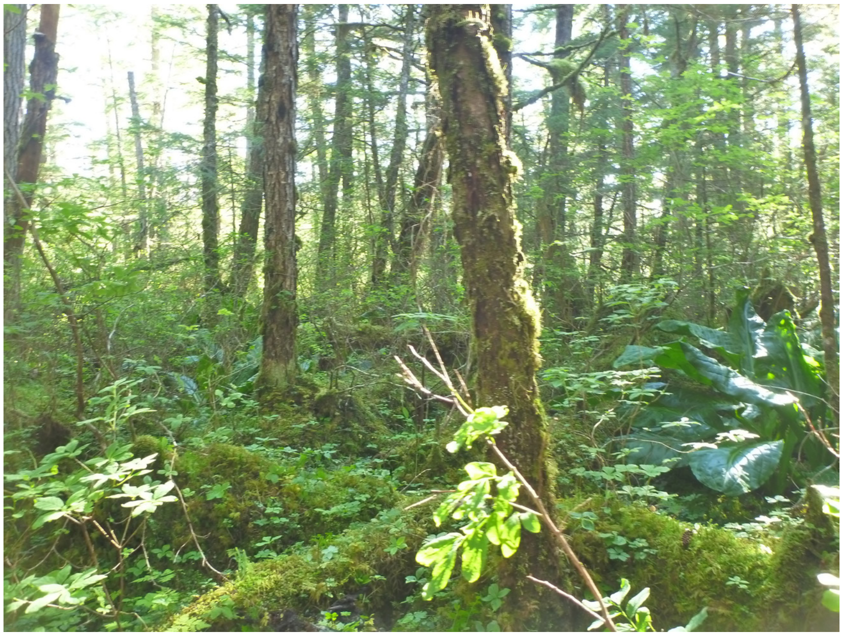

Figure 95.—The reference plant community for Ecological Site F220XY447AK (Maritime Forest Loamy Organic Slopes).

gravelly colluvium. They are silt loam, are poorly drained, and have a water table within 8 to 12 inches of the soil surface throughout the growing season.

This site supports an open needleleaf forest consisting of mature mixed conifers with a moss-covered soil surface (fig. 95). Dominant species are mountain hemlock (*Tsuga mertensiana*) and western hemlock (*Tsuga heterophylla*). Alaska cedar (*Callitropsis nootkatensis*) and Sitka spruce (*Picea sitchensis*) can occur on the site but not as consistently as hemlock species. Common understory species include American skunkcabbage (*Lysichiton americanus*), deercabbage (*Nephrophyllidium crista-galli*), rusty menziesia (*Menziesia ferruginea*), splendid feather moss (*Hylocomium splendens*), rhizomnium moss (*Rhizomnium glabrescens*), and *Sphagnum* species.

F220XY455AK—Maritime Forest Sandy Coastal Plain

This site occurs on outwash plains (fig. 96). Slopes mostly are less than 3 percent. The soils are sandy and poorly drained or very poorly drained. The water table is within 4 inches of the soil surface throughout the growing season, and ponding frequently occurs for long durations. These soils are very deep and have very few rock fragments.

This site supports two communities that respond to hydrologic changes as a result of human activities and/or natural events affecting soil moisture (fig. 97). Where soils are relatively wet for several years, the site supports a needleleaf woodland with stunted Sitka spruce (*Picea sitchensis*) and lodgepole pine (*Pinus contorta*). When soils are drier, it supports an open needleleaf spruce and pine forest. Western hemlock (*Tsuga heterophylla*) is common, but cover is low. The understory is variable; some areas are dominated by moss and others are dominated by a mixed shrub-forb-moss understory that has higher species diversity. Common shrub species include Sitka alder (*Alnus viridis* ssp. *sinuata*), oval-leaf blueberry (*Vaccinium ovalifolium*), and black crowberry (*Empetrum nigrum*). Forb species include sidebells wintergreen (*Orthilia secunda*), heartleaf twayblade (*Listera cordata*), and bunchberry dogwood (*Cornus canadensis*). Common mosses include splendid feather moss (*Hylocomium splendens*) and Schreber's big red stem moss (*Pleurozium schreberi*). Anthropogenic

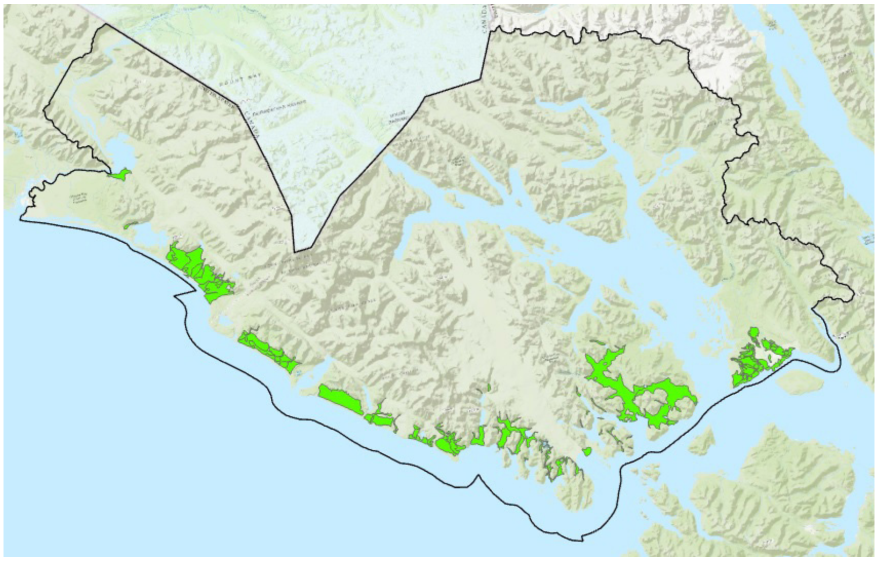

Figure 96.—Location (in bright green) of Ecological Site F220XY455AK (Maritime Forest Sandy Coastal Plain) in the survey area.

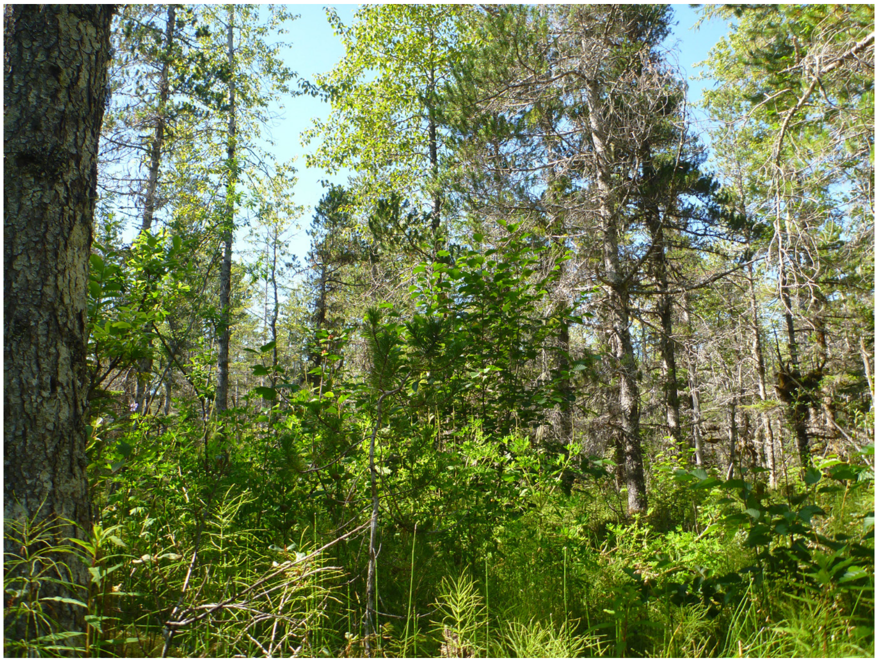

Figure 97.—The reference plant community for Ecological Site F220XY455AK (Maritime Forest Sandy Coastal Plain).

ditching activities on this site facilitate increased soil drainage and soil aeration and a tendency toward more productive trees.

F220XY460AK—Maritime Forest Gravelly Alluvial Plain

This site occurs on stream terraces on alluvial plains which no longer flood (fig. 98). Slopes are less than 8 percent. The soils formed in deep, stratified sandy alluvium capped by silt loam to very fine sandy loam windblown sediments. The alluvium subsoils commonly have gravel lenses. These soils are moderately well drained or well

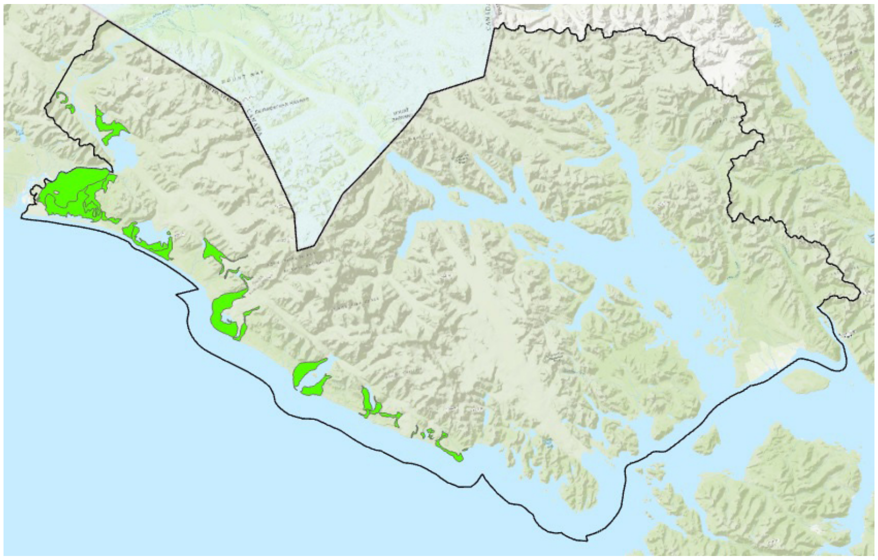

Figure 98.—Location (in bright green) of Ecological Site F220XY460AK (Maritime Forest Gravelly Alluvial Plain) in the survey area.

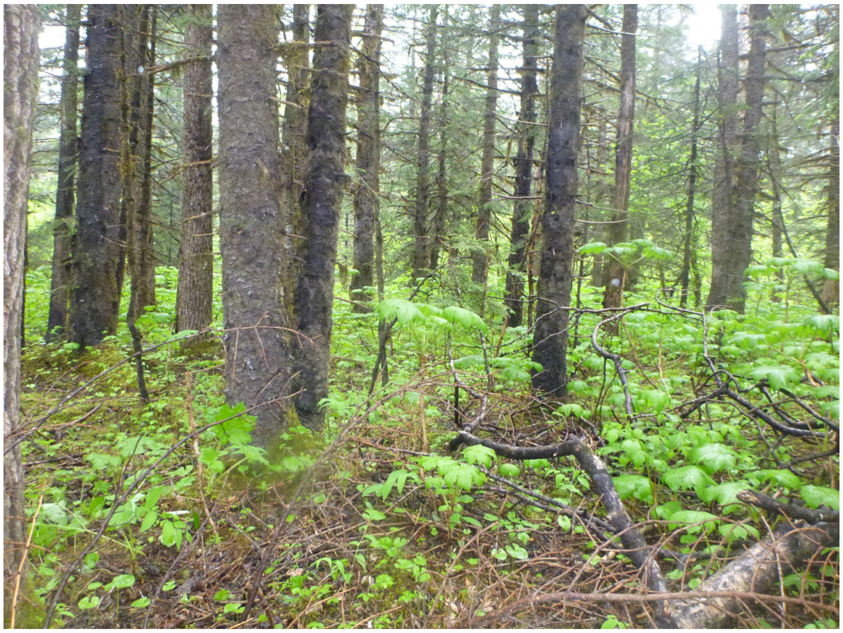

Figure 99.—The reference plant community for Ecological Site F220XY460AK (Maritime Forest Gravelly Alluvial Plain).

drained. The water table is more than 28 inches below the soil surface throughout the growing season.

The most common plant community on this site is an open mixed forest dominated by balsam poplar (*Populus balsamifera*) and Sitka spruce (*Picea sitchensis*) (fig. 99). However, balsam poplar is commonly a remnant of a past flooding regime that no longer exists on this site. Over time, the community tends toward an open coniferous forest comprised primarily of productive Sitka spruce. Common understory species include Sitka alder (*Alnus viridis* ssp. *sinuata*), Barclay's willow (*Salix barclayi*), devilsclub (*Oplopanax horridus*), salmonberry (*Rubus spectabilis*), and western oakfern (*Gymnocarpium dryopteris*). Mosses, including rhizomnium moss

(*Rhizomnium glabrescens*), hookeria moss (*Hookeria* spp.), and Schreber's big red stem moss (*Pleurozium schreberi*), are common.

F220XY464AK—Maritime Forest Loamy Slopes Cold

This site occurs on hills with moderate to steep slopes (fig. 100). The soils formed in volcanic ash over colluvium over residuum. Bedrock is typically about 40 to 60 inches below the soil surface. These soils are poorly drained. The water table is within 9 inches of the soil surface throughout the growing season.

The most common community on this site is a closed tall scrub community dominated by Sitka alder (*Alnus viridis* ssp. *sinuata*) (fig. 101). An open needleaf forest dominated by Sitka spruce (*Picea sitchensis*) can also occur; however, treethrow is common in these wet soils. The frequency of treethrow drives community dynamics on

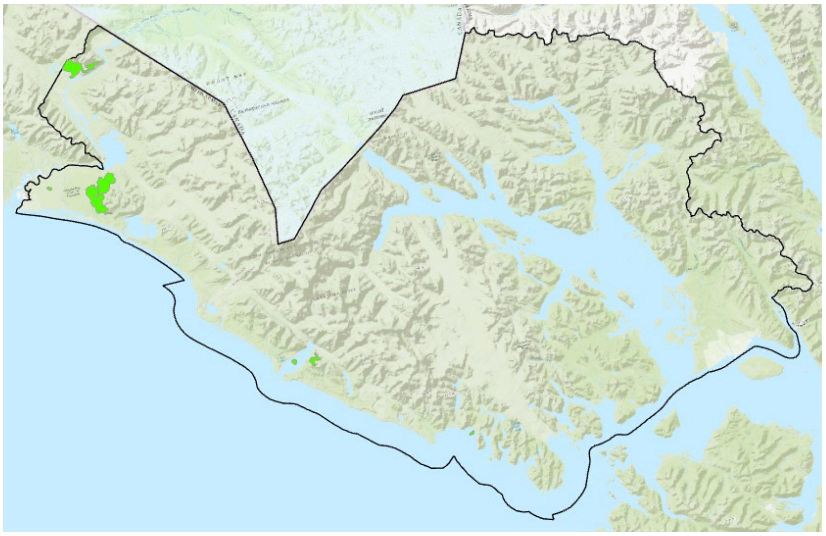

Figure 100.—Location (in bright green) of Ecological Site F220XY464AK (Maritime Forest Loamy Slopes Cold) in the survey area.

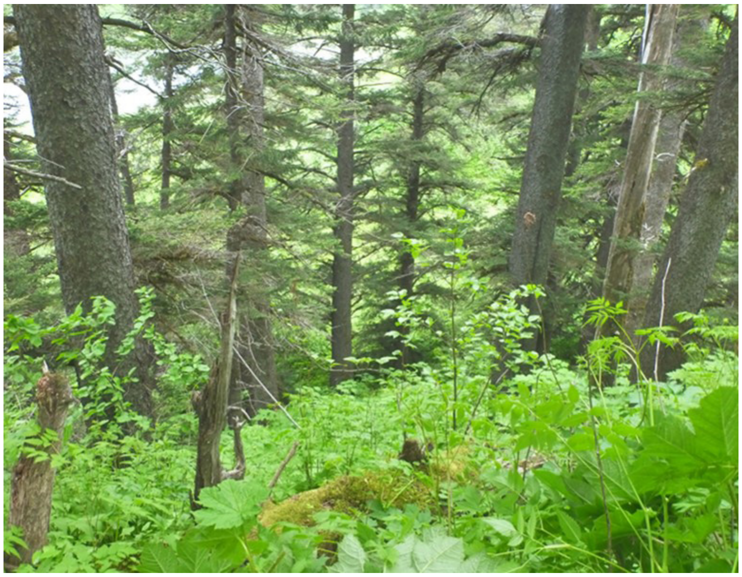

Figure 101.—The reference plant community for Ecological Site F220XY464AK (Maritime Forest Loamy Slopes Cold).

this site. Other common understory species include salmonberry (*Rubus spectabilis*), devilsclub (*Oplopanax horridus*), stink currant (*Ribes bracteosum*), common ladyfern (*Athyrium felix-femina*), bride's feathers (*Aruncus dioicus*), and western oakfern (*Gymnocarpium dryopteris*). Moss cover is noticeably minimal or absent on this site.

F220XY466AK—Maritime Forest Sandy Plains Eolian

This site occurs on eolian dunes on plains. Slopes are typically less than 15 percent (fig. 102). The soils formed in well drained deep sands with few rock fragments.

This site supports productive closed needleleaf communities dominated by Sitka spruce (*Picea sitchensis*) (fig. 103). In the most mature community, western hemlock (*Tsuga heterophylla*) can become co-dominant. The understory is mostly a thick mat of feather moss species except in canopy gaps resulting from treethrow. When treethrow or another disturbance creates a gap in the overstory, spruce regenerates quickly

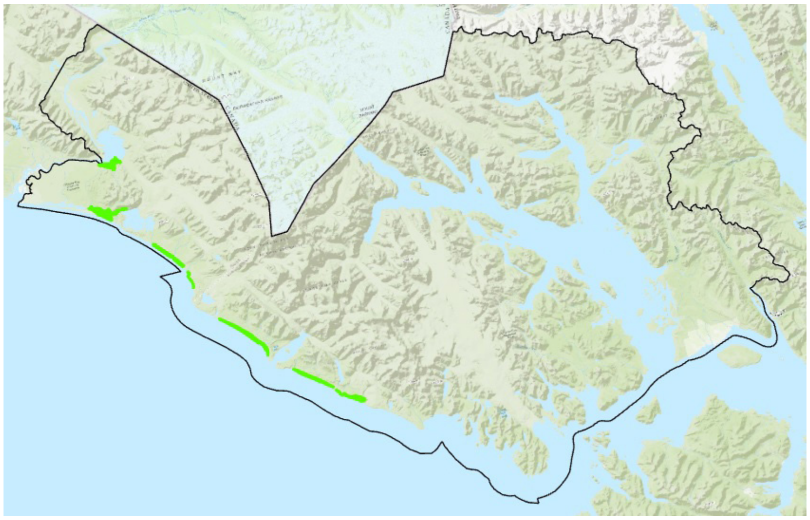

Figure 102.—Location (in bright green) of Ecological Site F220XY466AK (Maritime Forest Sandy Plains Eolian) in the survey area.

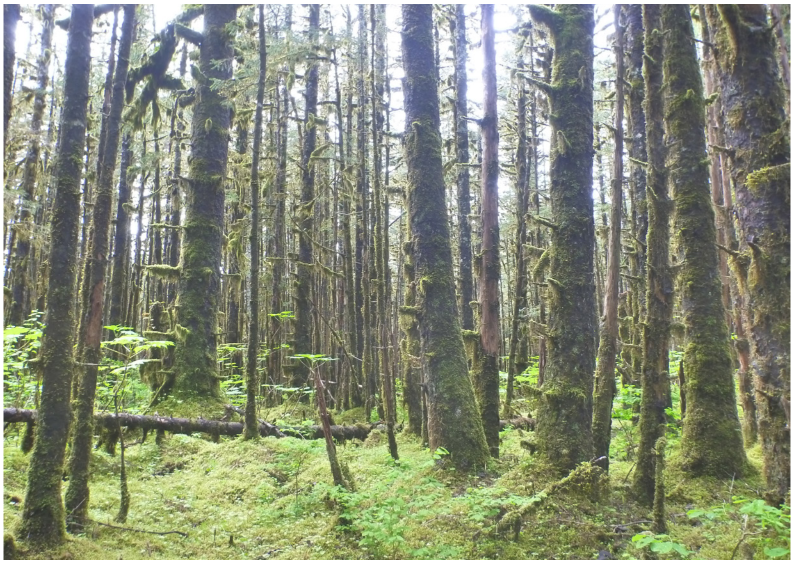

Figure 103.—The reference plant community for Ecological Site F220XY466AK (Maritime Forest Sandy Plains Eolian).

and other understory species also become more abundant. Common understory species include devilsclub (*Oplopanax horridus*), strawberryleaf raspberry (*Rubus pedatus*), oval-leaf blueberry (*Vaccinium ovalifolium*), bunchberry dogwood (*Cornus canadensis*), and spreading woodfern (*Dryopteris expansa*). Common feather moss species include Schreber's big red stem moss (*Pleurozium schreberi*), splendid feather moss (*Hylocomium splendens*), and *Rhizomnium* species.

F220XY468AK—Maritime Forest Loamy Slopes Warm

This site occurs on convex hillslopes (fig. 104). Slopes range mostly from 5 to 35 percent. The soils formed in moderately deep colluvium over residuum. Bedrock is 20 to 40 inches below the soil surface. These soils are very fine sandy loam, are well drained, and have about 30 percent rock fragments, by volume.

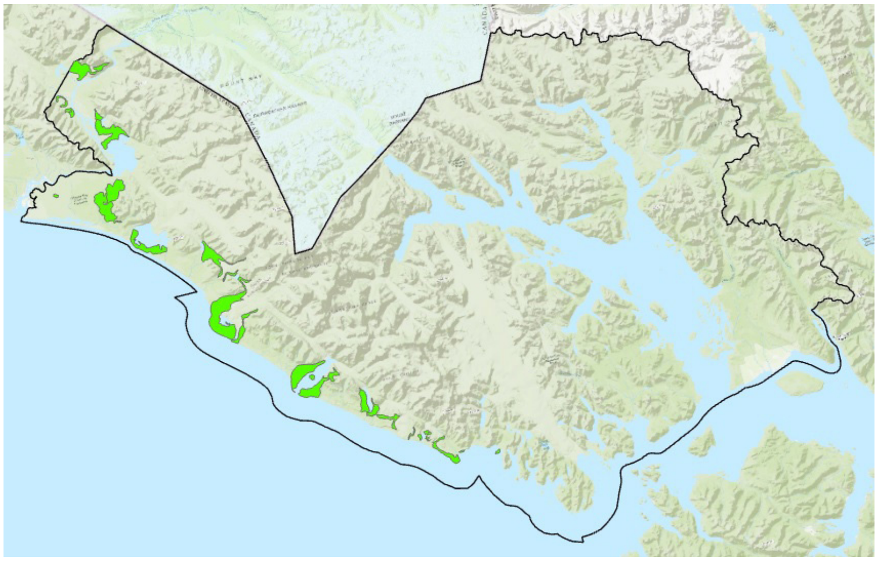

Figure 104.—Location (in bright green) of Ecological Site F220XY468AK (Maritime Forest Loamy Slopes Warm) in the survey area.

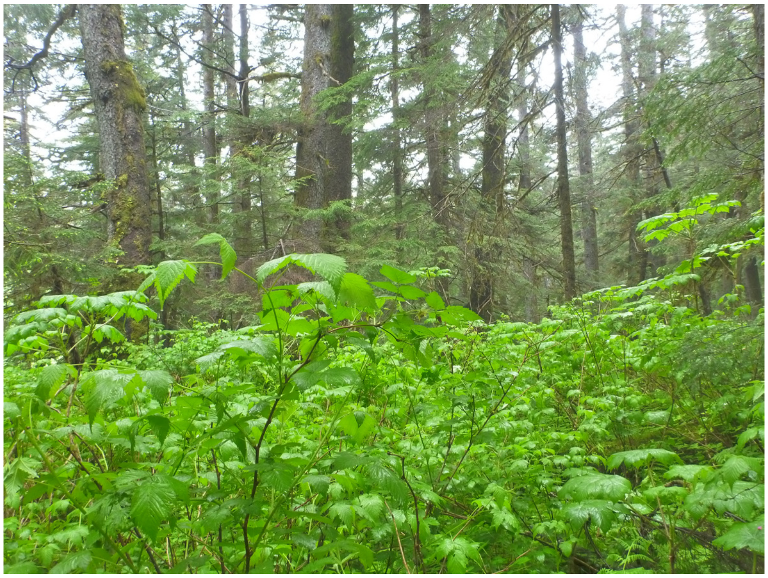

Figure 105.—The reference plant community for Ecological Site F220XY468AK (Maritime Forest Loamy Slopes Warm).

This site is distinguished by the dominance of western hemlock (*Tsuga heterophylla*) in the overstory of a closed needleleaf forest community (fig. 105). Sitka spruce (*Picea sitchensis*) may also be present. The understory consists of dense shrubs, commonly salmonberry (*Rubus spectabilis*), devilsclub (*Oplopanax horridus*), and red baneberry (*Actaea rubra*). Common understory forbs include threeleaf foamflower (*Tiarella trifoliata*), common ladyfern (*Athyrium filix-femina*), western oakfern (*Gymnocarpium dryopteris*), and spreading woodfern (*Dryopteris expansa*). The forest floor is covered by herbaceous litter, woody debris, and moss species, including splendid feather moss (*Hylocomium splendens*) and Schreber's big red stem moss (*Pleurozium schreberi*).

R220XY329AK—Estuarine Herbaceous Gravelly Coastal Plain

This site occurs in tidal areas associated with coastal rivers and flats that are frequently flooded by high ocean tides (fig. 106). Seawater mixes with freshwater on

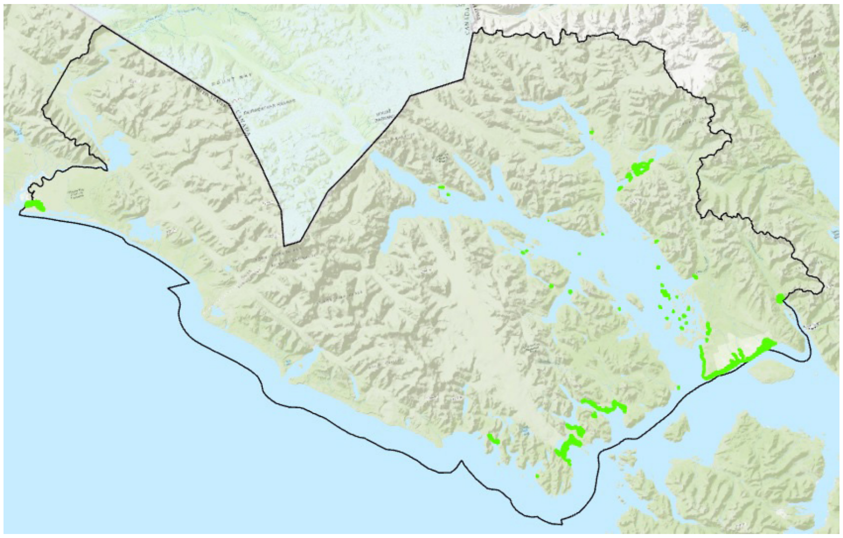

Figure 106.—Location (in bright green) of Ecological Site R220XY329AK (Estuarine Herbaceous Gravelly Coastal Plain) in the survey area.

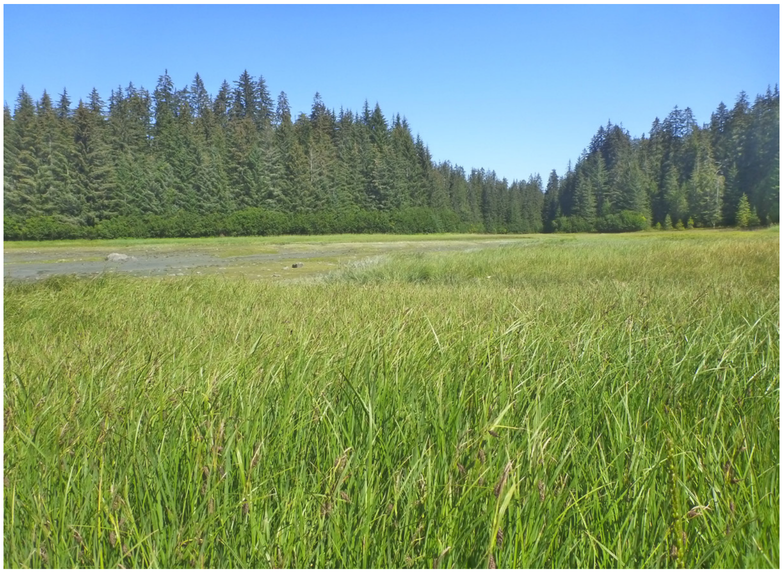

Figure 107.—The reference plant community for Ecological Site R220XY329AK (Estuarine Herbaceous Gravelly Coastal Plain).

this site, resulting in brackish conditions that favor salt-tolerant plant species. The soils formed in marine deposits, and surface textures are typically silt loam or silty clay loam. The rock fragment content and sand content commonly increase with soil depth. These soils are poorly drained or very poorly drained, occurring in areas between barren mudflats (downslope) and drier terraces and dunes (upslope).

The reference community phase is a wet graminoid herbaceous community dominated by salt-tolerant Lyngbye's sedge (*Carex lyngbyei*) (fig. 107). Other common species are sea milkwort (*Glaux maritima*), alkali buttercup (*Ranunculus cymbalaria*), seaside arrowgrass (*Triglochin maritima*), saltmarsh starwort (*Stellaria humifusa*), silverweed cinquefoil (*Argentina anserina*), and tufted hairgrass (*Deschampsia cespitosa*).

R220XY422AK—Estuarine Herbaceous Sandy Coastal Plain

This site occurs on dry beach ridges and sandy terraces associated with ocean shores (fig. 108). These landscape positions are not flooded or ponded by tides but are influenced by salt spray to varying degrees. Slopes range from 0 to 15 percent, and elevations are typically less than 50 feet above sea level. The soils on this site are the driest soils on the coastal landscape. They are sandy and moderately drained to somewhat excessively drained. The water table is commonly more than 52 inches below the soil surface but can be within 30 inches during wet periods.

Three plant communities occur on this site (fig. 109). They are differentiated by grass, forb, or shrub dominance. American dunegrass (*Leymus mollis*) dominates in relatively dry areas, and beach strawberry (*Fragaria chiloensis*), little yellow rattle (*Rhinanthus minor*), and beach pea (*Lathyrus japonicus*) dominate in relatively wet areas. Sitka alder (*Alnus viridis* ssp. *sinuata*) dominates in areas that are relatively protected from salt spray, particularly on the upper reaches of this site, farthest from the ocean.

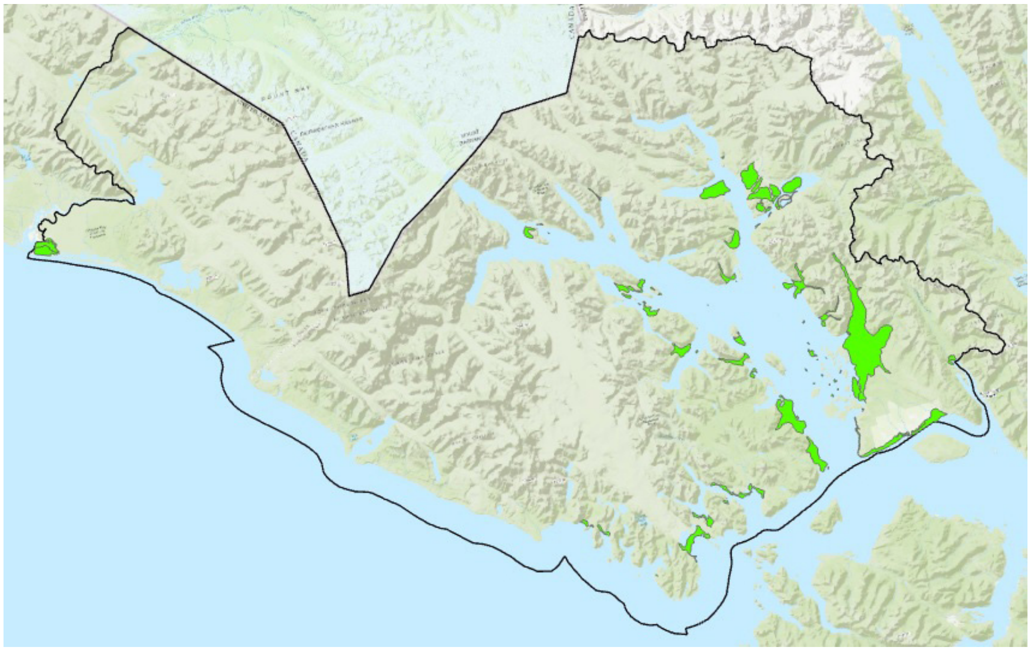

Figure 108.—Location (in bright green) of Ecological Site R220XY422AK (Estuarine Herbaceous Sandy Coastal Plain) in the survey area.

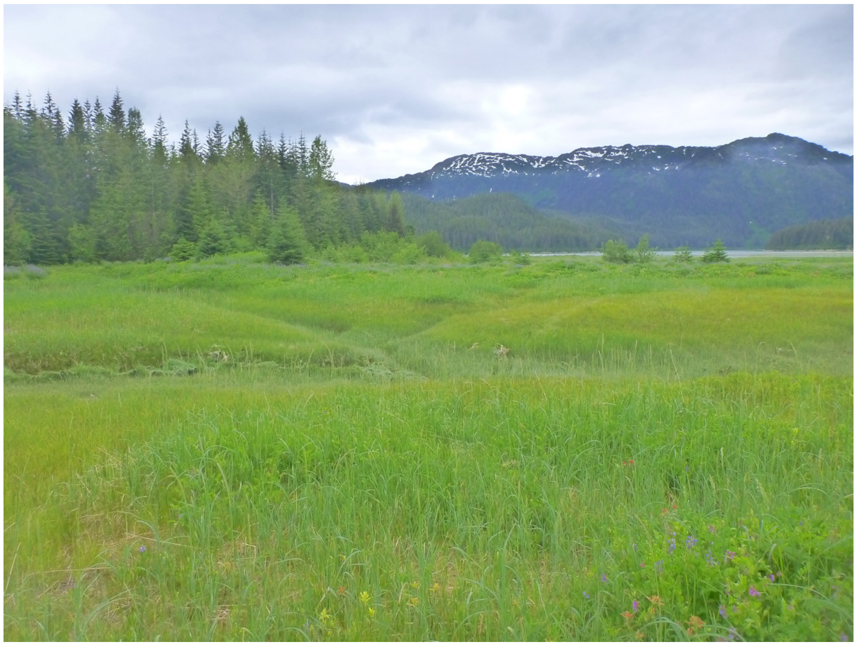

Figure 109.—The reference plant community for Ecological Site R220XY422AK (Estuarine Herbaceous Sandy Coastal Plain).

R220XY423AK—Estuarine Herbaceous Sandy Depression

This site occurs in naturally ponded depressions in coastal areas with deep, coarse textured soils (fig. 110). The water table ranges from several inches above the soil surface (ponded) to 4 inches below the soil surface. The soils are very poorly drained and nutrient poor.

The reference state supports an open low scrubland dominated by sweetgale (*Myrica gale*) and a wet herbaceous community dominated by *Equisetum* and *Carex* spp. (fig. 111). Diverse water-loving plants are in both communities. Wetness is the

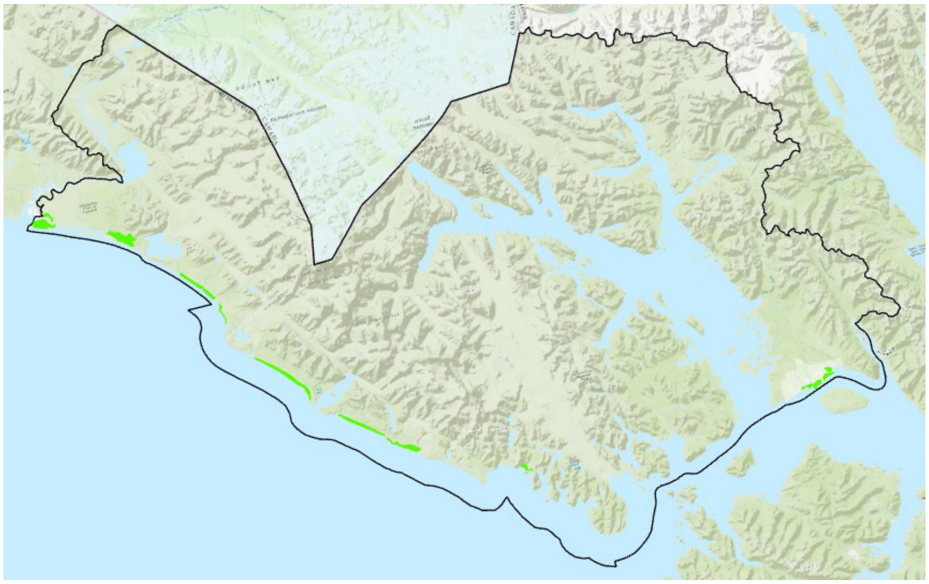

Figure 110.—Location (in bright green) of Ecological Site R220XY423AK (Estuarine Herbaceous Sandy Depression) in the survey area.

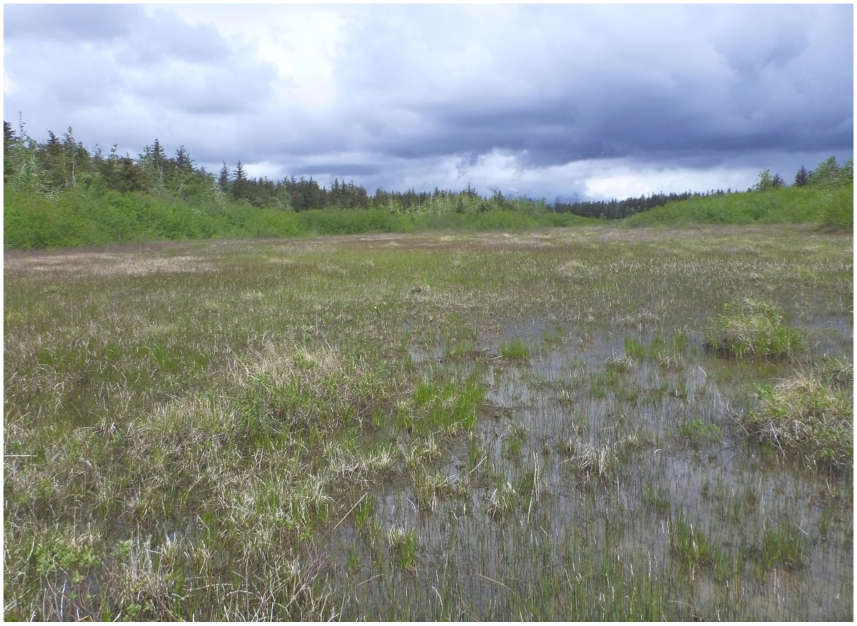

Figure 111.—The reference plant community for Ecological Site R220XY423AK (Estuarine Herbaceous Sandy Depression).

primary driver of shrub cover. Sweetgale and other shrubs are more abundant during relatively dry periods and less abundant during relatively wet periods. Changes in hydrology may be driven by human activity or natural events.

R220XY424AK—Estuarine Herbaceous Sandy Beach Plain

This site occurs on relatively flat, moist beach ridges and marine terraces associated with ocean shores (fig. 112). These landscape positions are not flooded or ponded by tides but are influenced by salt spray. The water table is about 4 to 21 inches below the soil surface throughout the growing season. The soils are sandy loam at the surface and commonly coarser in deeper horizons. They are poorly

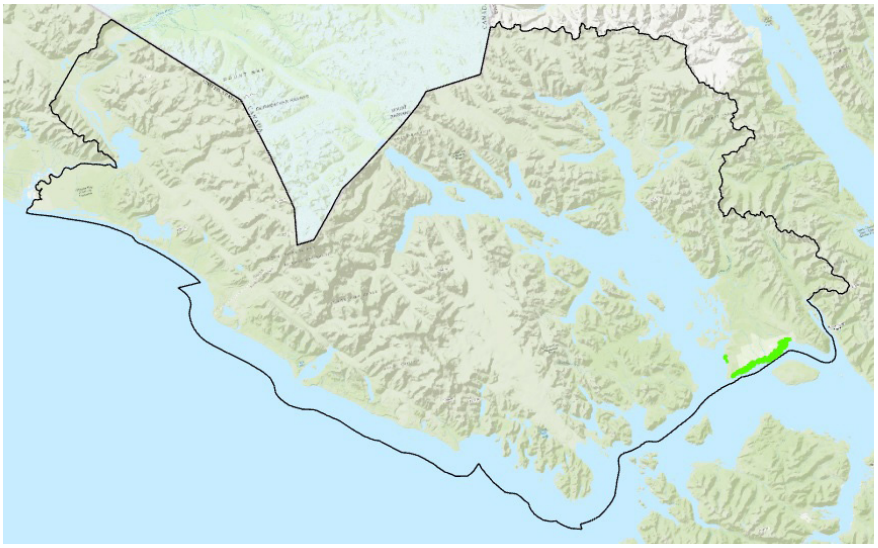

Figure 112.—Location (in bright green) of Ecological Site R220XY424AK (Estuarine Herbaceous Sandy Beach Plain) in the survey area.

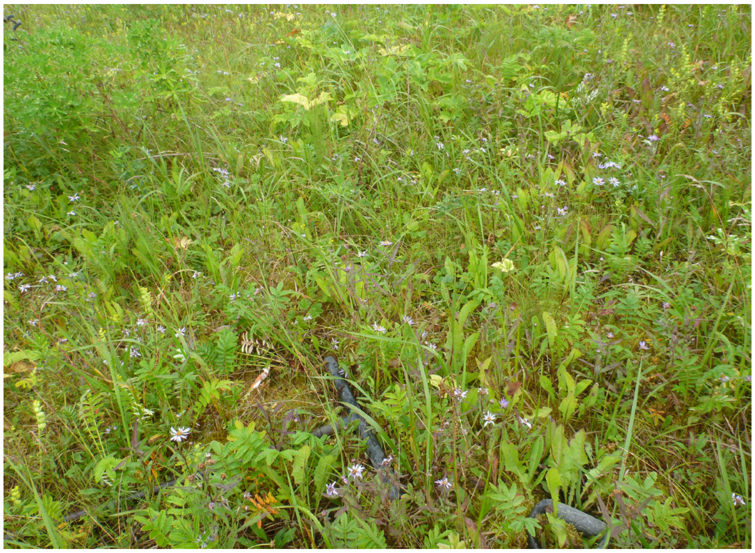

Figure 113.—The reference plant community for Ecological Site R220XY424AK (Estuarine Herbaceous Sandy Beach Plain).

drained or somewhat poorly drained and have very few rock fragments. The salt spray that occurs on this site can result in relatively minor soil salinity.

This site supports a mesic forb herbaceous plant community dominated by Nootka lupine (*Lupinus nootkatensis*), seacoast angelica (*Angelica lucida*), and/or little yellow rattle (*Rhinanthus minor*) (fig. 113). Other herbaceous species may be abundant on this site as well, but not as consistently as the three dominant species.

R220XY425AK—Maritime Shrub Gravelly Drainageway

This site occurs in drainageways in alluvium and glacial outwash along the coastal plains (fig. 114). Site hydrology is characterized by small stream channels that flood regularly. The soils are poorly drained or somewhat poorly drained and have a water table within 30 inches of the soil surface throughout the growing season. They consist of fine sandy loam to loamy sand. These soils commonly are stratified with lenses of

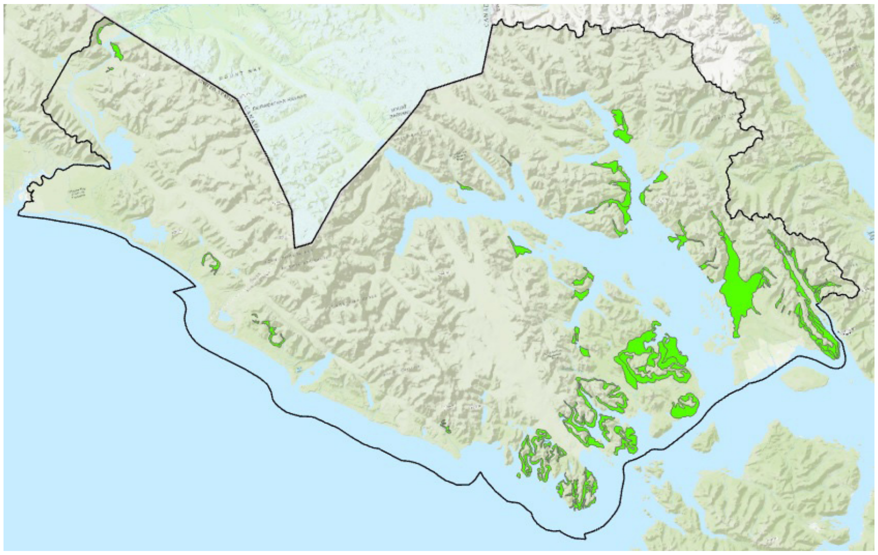

Figure 114.—Location (in bright green) of Ecological Site R220XY425AK (Maritime Shrub Gravelly Drainageway) in the survey area.

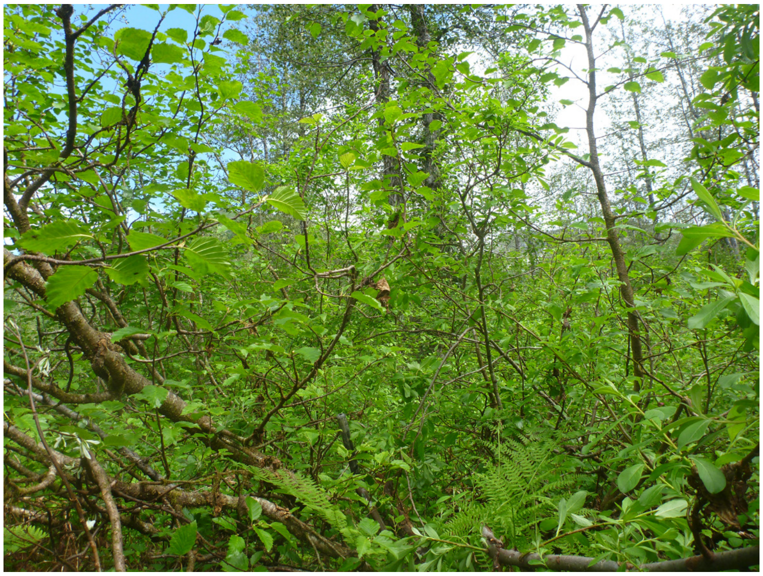

Figure 115.—The reference plant community for Ecological Site R220XY425AK (Maritime Shrub Gravelly Drainageway).

gravel and coarser textures in deeper soil horizons and have a thin organic layer on the soil surface.

This site supports a closed tall shrub community dominated by Sitka alder (*Alnus viridis* ssp. *sinuata*), Sitka willow (*Salix sitchensis*), salmonberry (*Rubus spectabilis*), and feltleaf willow (*Salix alaxensis*) (fig. 115). Diverse forbs make up a small proportion of the community. Ground cover largely consists of litter and various moss species with minimal bare areas.

R220XY426AK—Maritime Shrub Gravelly Floodplain Low

This site occurs in river valleys and on coastal plains on low flood plains adjacent to a river or stream channel (fig. 116). These low flood plains are frequently to occasionally flooded. They may include some closed depressions where water ponds

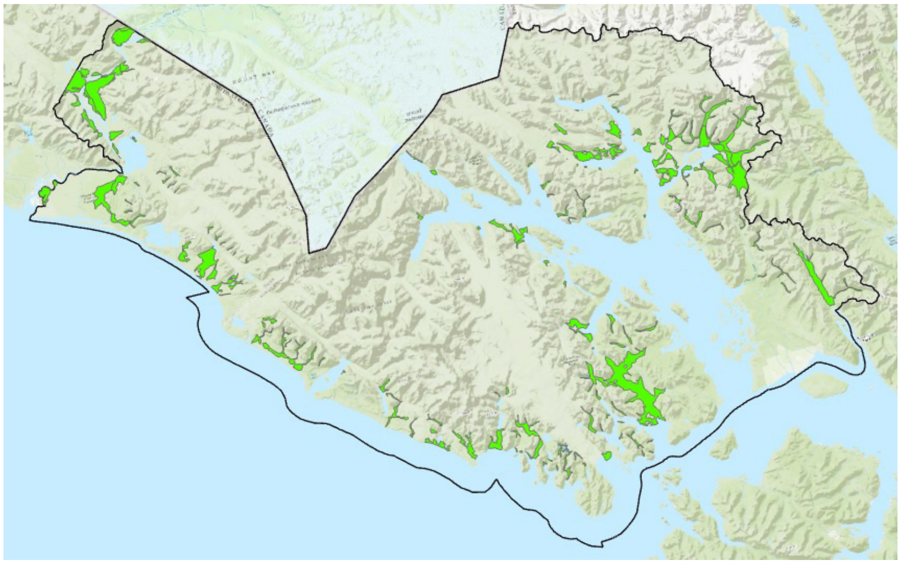

Figure 116.—Location (in bright green) of Ecological Site R220XY426AK (Maritime Shrub Gravelly Floodplain Low) in the survey area.

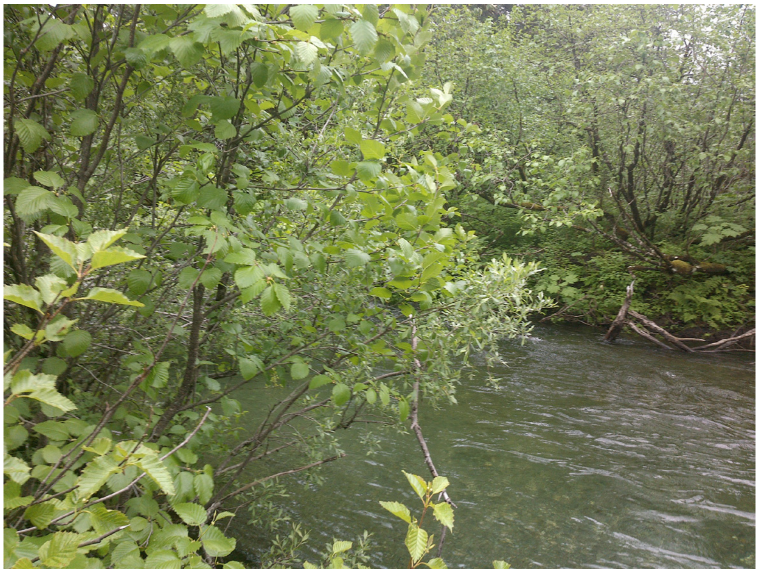

Figure 117.—The reference plant community for Ecological Site R220XY426AK (Maritime Shrub Gravelly Floodplain Low).

on the surface for long durations. The soils are stratified silt loam to loamy sand and commonly have lenses of gravel and sandier textures in deeper soil horizons. In relatively small, closed depressions, the site commonly has very deep peat deposits as a result of long-duration ponding. The soil drainage class ranges from very poorly drained on streambanks and in depressions to moderately well drained on elevated flood-plain steppes.

This site supports two communities that reflect a disturbance regime of high-intensity flooding. Following severe flood events, the community is typically an open tall shrub community with abundant herbaceous understory plants (fig. 117). In the absence of severe flooding, shrub abundance increases, herbaceous productivity decreases, and the community becomes a closed tall scrubland comprised dominantly of Sitka alder (*Alnus viridis* ssp. *sinuata*) and willow (*Salix* spp.).

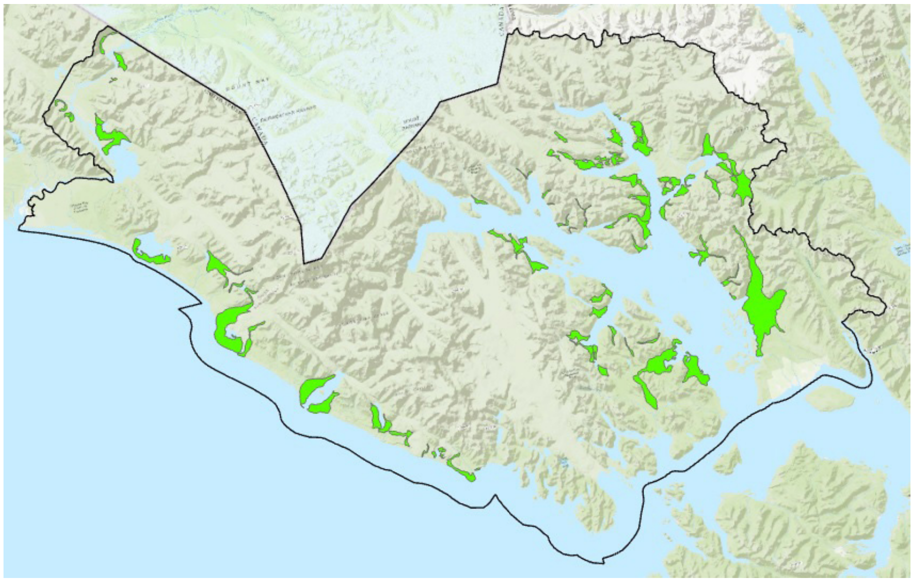

Figure 118.—Location (in bright green) of Ecological Site R220XY436AK (Maritime Graminoid Loamy Plain Depresson) in the survey area.

R220XY436AK—Maritime Graminoid Loamy Plain Depression

This site occurs in wet depressions on glacial valley floors (fig. 118). Ponding is common for long durations. The water table is typically within 4 inches of the soil surface throughout the growing season. The soils formed in lacustrine deposits over till. They are deep and very poorly drained. Silty surface textures are underlain by gravelly loam with approximately 40 percent rock fragments, by volume.

This site supports a wet graminoid herbaceous plant community consisting of facultative wet and obligate wetland species, including lakeshore sedge (*Carex lenticularis*), longawn sedge (*Carex macrochaeta*), entireleaf mountain-avens (*Dryas integrifolia*), and *Equisetum* species (fig. 119). Moss may be abundant on the soil surface.

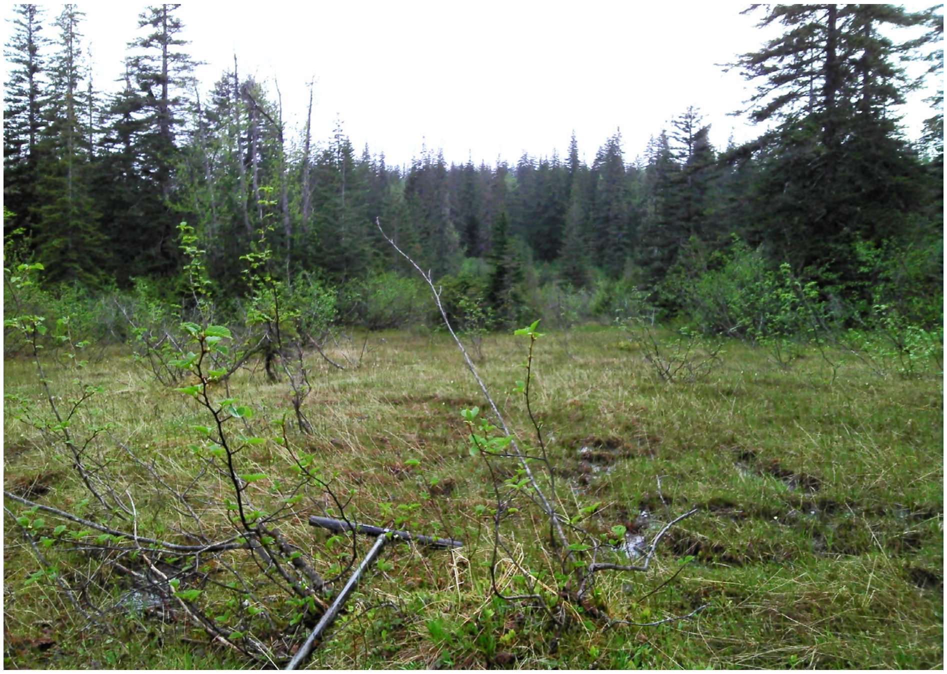

Figure 119.—The reference plant community for Ecological Site R220XY436AK (Maritime Graminoid Loamy Plain Depresson).

R220XY443AK—Maritime Scrub Loamy Slopes Steep

This site occurs in avalanche chutes characterized by linear concave features of steep mountain slopes (fig. 120). Avalanche chutes typically occur on the center third of mountainflanks on slopes ranging from 40 to 100 percent. The soils are very cobbly sandy loam and formed in colluvium. They typically consist of about 80 percent rock fragments, by volume, and may have rock fragments on the surface. In some areas, bedrock is at depths of 20 inches or more.

This site supports two distinctive plant communities driven by avalanche events (fig. 121). The most common community phase is an open tall scrub community dominated by Sitka alder (*Alnus viridis* ssp. *sinuata*). The other is an early seral mesic forb herbaceous community that establishes following an avalanche. If the time period with no avalanches is long enough, tree species, including balsam poplar (*Populus balsamifera*) and Sitka spruce (*Picea sitchensis*), may establish in low abundance.

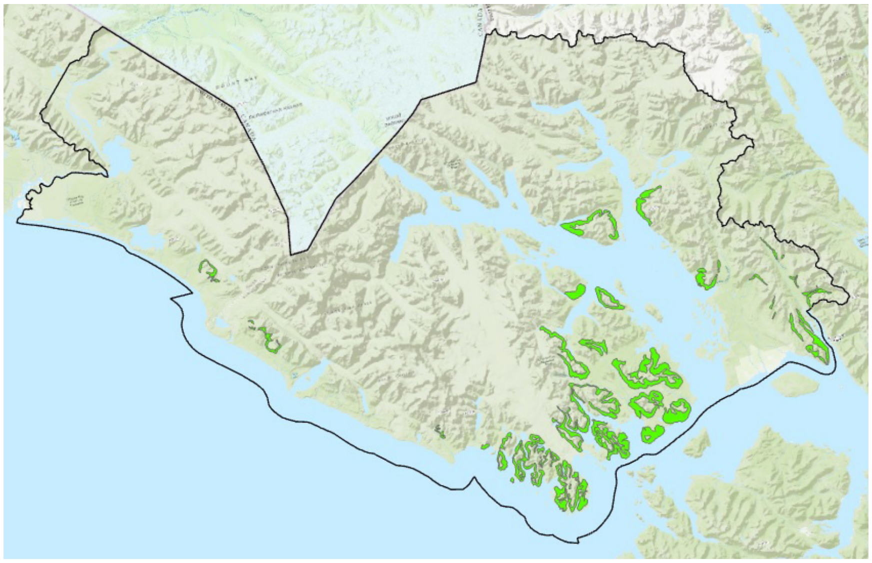

Figure 120.—Location (in bright green) of Ecological Site R220XY443AK (Maritime Scrub Loamy Slopes Steep) in the survey area.

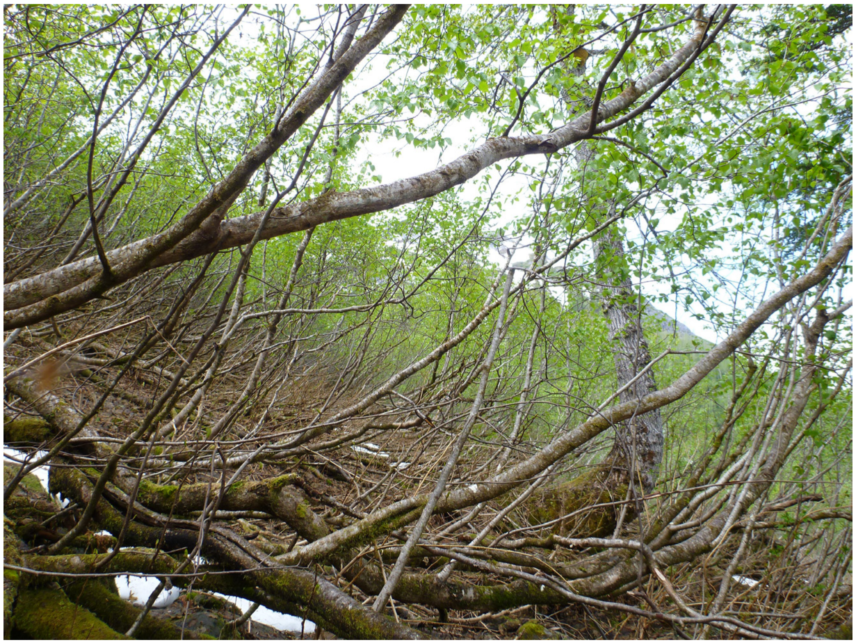

Figure 121.—The reference plant community for Ecological Site R220XY443AK (Maritime Scrub Loamy Slopes Steep).

R220XY444AK—Maritime Scrub Gravelly Drainageways Steep

This site occurs along drainageways on mountains and hills (fig. 122). Slopes range from 8 to 50 percent. The accumulation of meltwater and precipitation on this site results in continuous lateral flow of water via small stream channels and a water table within 24 to 28 inches of the soil surface. The soils are somewhat poorly drained to moderately well drained. They are fine sandy loam to loamy sand and commonly are stratified with lenses of gravel and coarser textures in deeper soil horizons.

This site supports an open tall shrub community dominated by Sitka alder (*Alnus viridis* ssp. *sinuata*) and Sitka willow (*Salix sitchensis*) and may also include a high

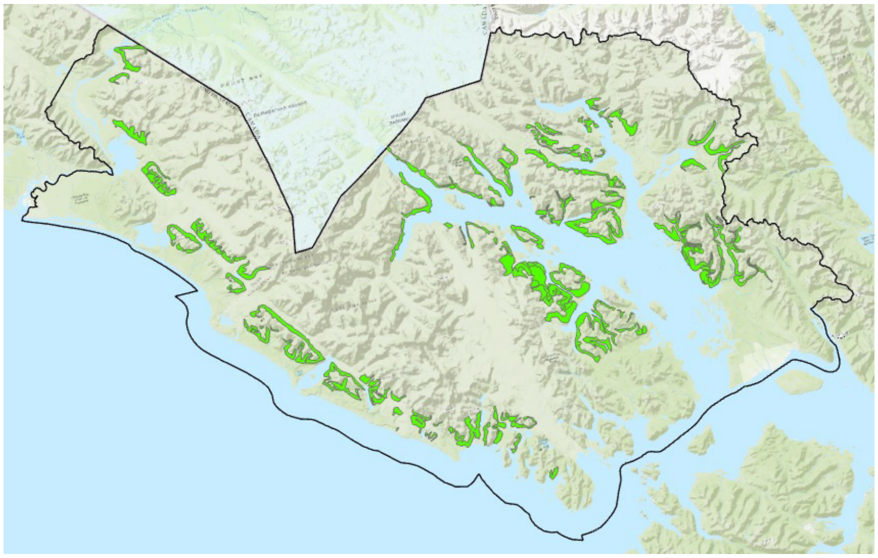

Figure 122.—Location (in bright green) of Ecological Site R220XY444AK (Maritime Scrub Gravelly Drainageways Steep) in the survey area.

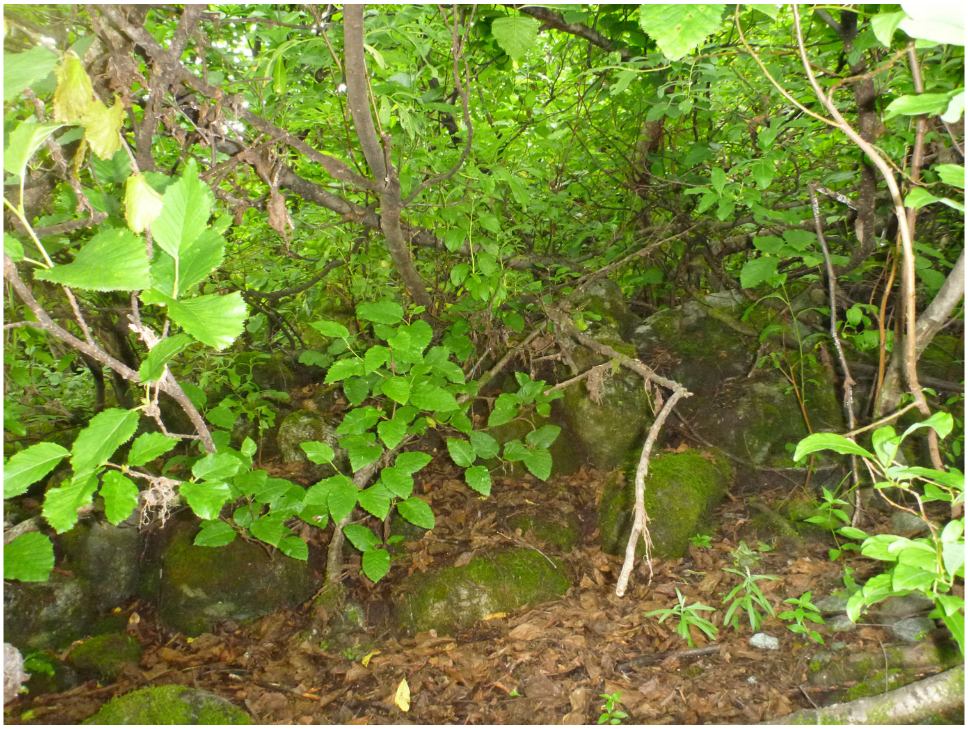

Figure 123.—The reference plant community for Ecological Site R220XY444AK (Maritime Scrub Gravelly Drainageways Steep).

cover of stink currant (*Ribes bracteosum*) (fig. 123). Spreading woodfern (*Dryopteris expansa*) and Braun's hollyfern (*Polystichum braunii*) can be abundant in the understory, along with stinging nettle (*Urtica dioica*) and bigflower tellima (*Tellima grandiflora*).

R220XY446AK—Maritime Scrub Loamy Escarpments

This site occurs on steep escarpments (fig. 124). Slopes range from 45 to 100 percent. The soils are well drained gravelly sandy loam that formed in colluvium over residuum. Bedrock is typically within 10 to 40 inches of the soil surface, and rock fragments make up about 40 percent of the soil volume.

This site supports an open tall scrub community dominated by Sitka alder (*Alnus viridis* ssp. *sinuata*) (fig. 125). Other common species are Barclay's willow (*Salix barclayi*), Sitka willow (*Salix sitchensis*), common ladyfern (*Athyrium filix-femina*), salmonberry (*Rubus spectabilis*), and bride's feathers (*Aruncus dioicus*). Many other

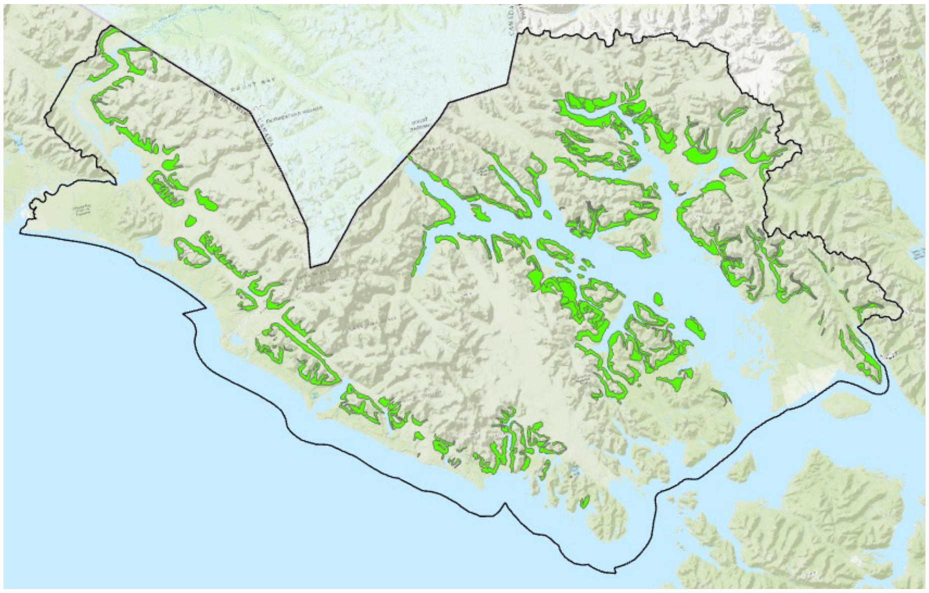

Figure 124.—Location (in bright green) of Ecological Site R220XY446AK (Maritime Scrub Loamy Escarpments) in the survey area.

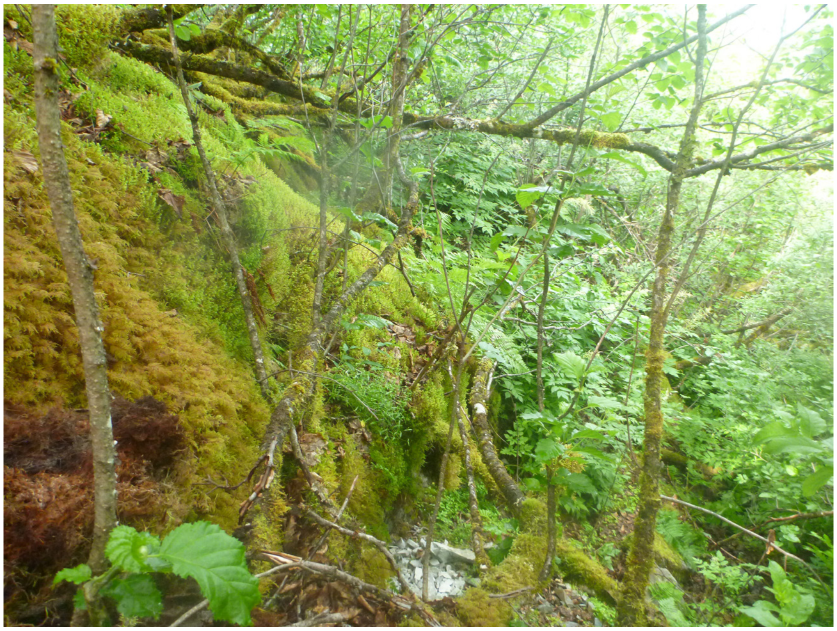

Figure 125.—The reference plant community for Ecological Site R220XY446AK (Maritime Scrub Loamy Escarpments).

herbaceous and shrub species may occur on this site, though less consistently. Although alternative communities following disturbance have not been observed, observations of primary succession on this site suggest that dwarf fireweed (*Chamerion latifolium*), Drummond's mountain-avens (*Dryas drummondii*), arctic willow (*Salix arctica*), and russet buffaloberry (*Shepherdia canadensis*) are common pioneer species following deglaciation.

R220XY461AK—Maritime Shrub Sandy Drainageways

This site occurs in naturally ponded depressions on a variety of landscapes and landforms (fig. 126). The soils are deep and coarse textured. The water table ranges from several inches above the soil surface (ponded) to 4 inches below. These soils are very poorly drained and nutrient poor.

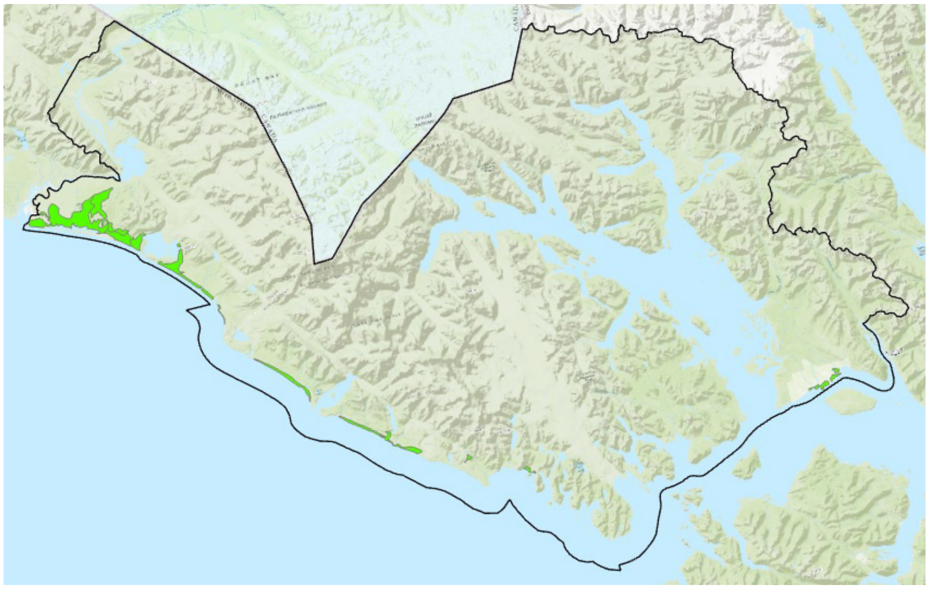

Figure 126.—Location (in bright green) of Ecological Site R220XY461AK (Maritime Shrub Sandy Drainageways) in the survey area.

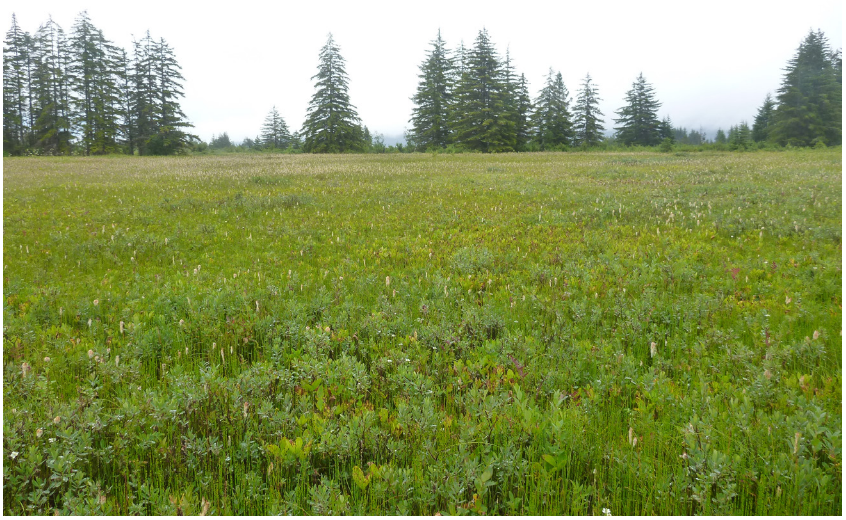

Figure 127.—The reference plant community for Ecological Site R220XY461AK (Maritime Shrub Sandy Drainageways).

The reference state supports an open low scrubland dominated by sweetgale (*Myrica gale*) and a wet herbaceous community dominated by *Equisetum* and *Carex* spp. (fig. 127). Diverse water-loving plants occur in both communities, and wetness is the primary driver of shrub cover. Sweetgale and other shrubs are more abundant during relatively dry periods and less abundant during relatively wet periods. Changes in hydrology can result from human activities or natural events.

R220XY465AK—Maritime Scrub Loamy Slopes

This site occurs on hills and ridges (fig. 128). Slopes typically range from 10 to 45 percent. The soils formed in colluvium over residuum. Bedrock is typically within 28 inches of the soil surface. These soils are moderately well drained and have very few rock fragments.

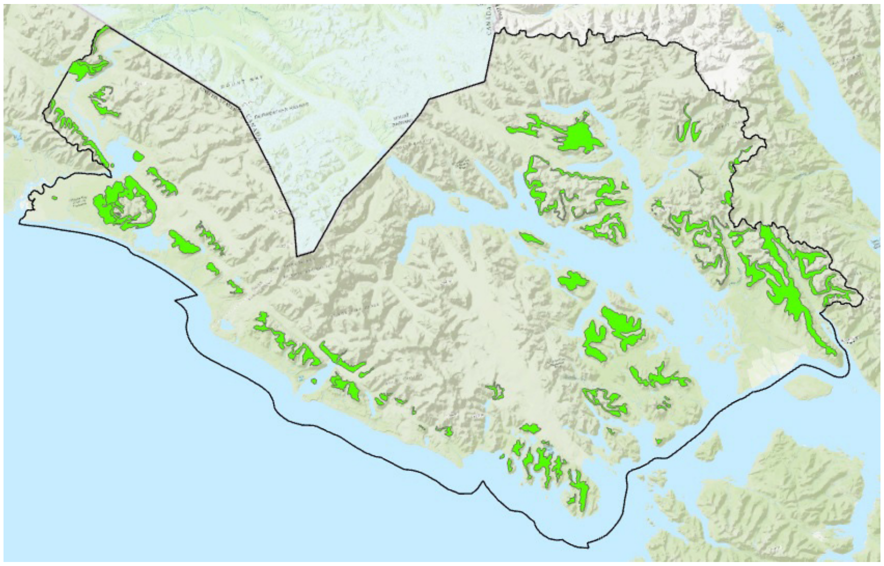

Figure 128.—Location (in bright green) of Ecological Site R220XY465AK (Maritime Scrub Loamy Slopes) in the survey area.

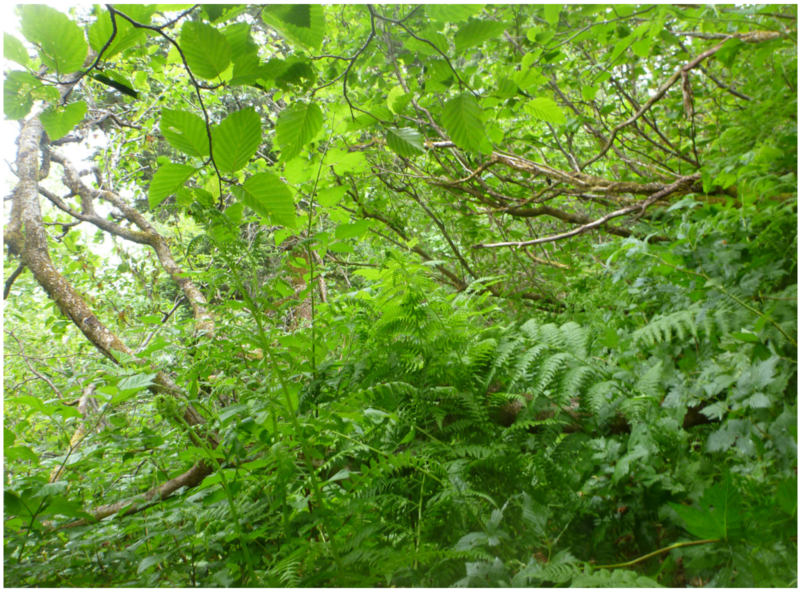

Figure 129.—The reference plant community for Ecological Site R220XY465AK (Maritime Scrub Loamy Slopes).

The plant community is dominated by productive Sitka alder (*Alnus viridis* ssp. *sinuata*) and stink currant (*Ribes bracteosum*) (fig. 129). Spreading woodfern (*Dryopteris expansa*) and Braun's hollyfern (*Polystichum braunii*) are also abundant.

R222XY356AK—Alpine Dwarf Scrub Dry Gravelly Slopes

This site occurs on mountain slopes in exposed positions where deep snow drifts do not occur, such as on warmer, south-facing and/or convex slopes (fig. 130). The soils are dry for much of the growing season and are moderately well drained or well drained. They formed in colluvium and/or weathered residuum and are gravelly. Bedrock typically occurs within 20 inches of the soil surface.

The reference plant community is ericaceous dwarf scrub (fig. 131). Exposed bedrock and surface rock fragments are common. Species diversity can be high with

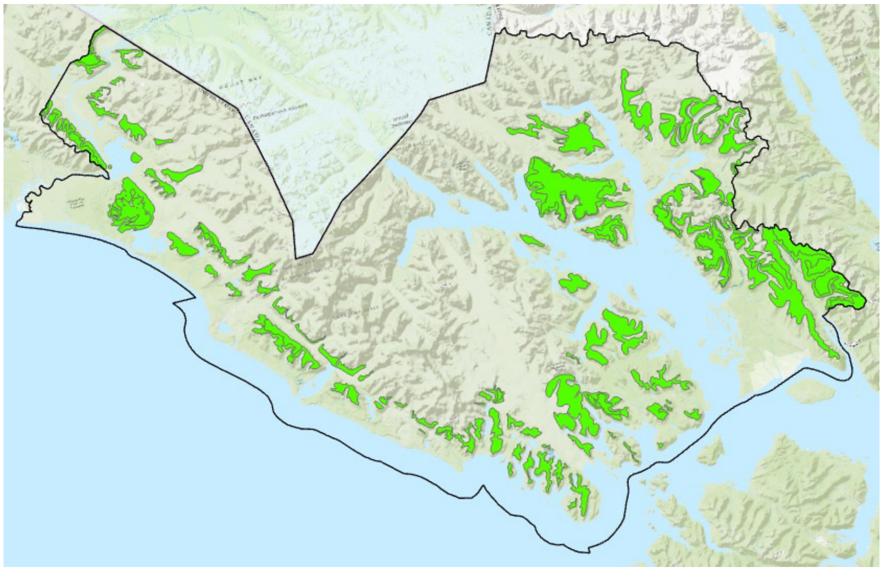

Figure 130.—Location (in bright green) of Ecological Site R222XY356AK (Alpine Dwarf Scrub Dry Gravelly Slopes) in the survey area.

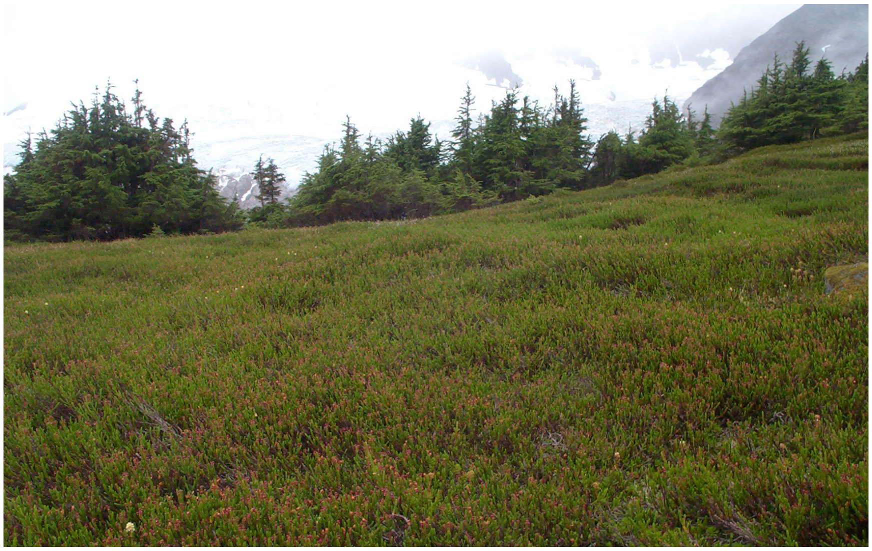

Figure 131.—The reference plant community for Ecological Site R222XY356AK (Alpine Dwarf Scrub Dry Gravelly Slopes).

a diverse range of shrub, graminoid, and forb species. Common species include black crowberry (*Empetrum nigrum*), western moss heather (*Cassiope mertensiana*), Alaska bellheather (*Harrimanella stellariana*), longawn sedge (*Carex macrochaeta*), boreal sagebrush (*Artemisia arctica*), Nootka lupine (*Lupinus nootkatensis*), and star reindeer lichen (*Cladina stellaris*). The primary disturbance factors that maintain this plant community are exposure to cold temperatures, wind, and avalanches.

R222XY360AK—Alpine Herbaceous Wet Organic Depressions

This site occurs in wet depressions within the subalpine and alpine life zones where soils are very limiting (fig. 132). The soils are very wet, organic rich, and bedrock-controlled. Although this site occurs on a wide-ranging band of elevation that dips into

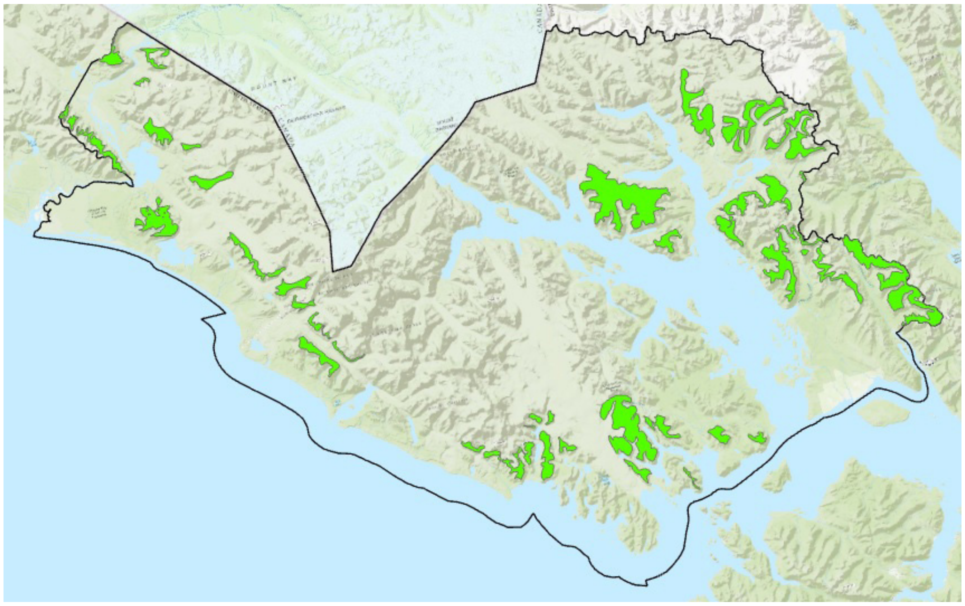

Figure 132.—Location (in bright green) of Ecological Site R222XY360AK (Alpine Herbaceous Wet Organic Depressions) in the survey area.

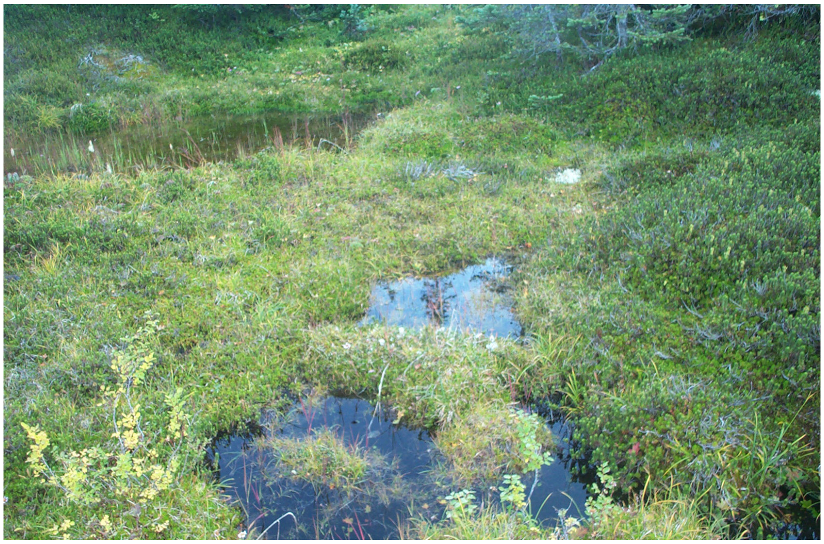

Figure 133.—The reference plant community for Ecological Site R222XY360AK (Alpine Herbaceous Wet Organic Depressions).

the subalpine, the soils prevent the growth of common subalpine species such as Sitka alder (*Alnus viridis* ssp. *sinuata*) and mountain hemlock (*Tsuga mertensiana*).

The reference plant community is a wet graminoid herbaceous meadow that is primarily composed of dwarf sedges (fig. 133). Common species include tufted bulrush (*Trichophorum cespitosum*), grassyslope arctic sedge (*Carex anthoxanthea*), black alpine sedge (*Carex nigricans*), white marsh marigold (*Caltha leptosepala*), and deercabbage (*Nephrophyllidium crista-galli*). The primary disturbance factors that maintain this plant community are exposure to cold temperatures, ponding, wind, and avalanches.

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for rangeland and forestland and as sites for buildings, sanitary facilities, highways and other transportation systems and parks and other recreational facilities. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, and lawns.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA-SCS, 1961). Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

The capability classification of map units in this park is given in the section “Detailed Soil Map Units” and in table 5.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

There are no areas in Glacier Bay National Park and Preserve that meet the soil requirements for prime farmland.

Hydric Soils

Table 6 lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; USDA-NRCS, 2010).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin et al., 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2014) and in the "Soil Survey Manual" (Soil Science Division Staff, 2017).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in “Field Indicators of Hydric Soils in the United States” (USDA-NRCS, 2010).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

Land Management Tables

In table 7, parts I through IV, interpretive ratings are given for various aspects of land management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified land management practice. *Well suited* indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified land management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for *fire damage* and *seedling mortality* are expressed as low, moderate, and high. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

Rating class terms for *hazard of erosion* are expressed as slight, moderate, severe, and very severe. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for erosion is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for land management practices.

Planting

Ratings for *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings for *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of planting equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Hazard of Erosion and Suitability for Roads

Ratings for *hazard of erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in areas where 50 to 75 percent of the surface has been exposed by different kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings for *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings for *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Site Preparation

Ratings for *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings for *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Site Restoration

Ratings for *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings for *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreation

The soils of the park are rated in table 8, parts I and II, according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in table 8 can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Foot traffic and equestrian trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Mountain bike and off-road vehicle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, depth to a water table, ponding, slope, flooding, and texture of the surface layer.

Dwellings

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 9 shows the degree and kind of soil limitations that affect dwellings and small commercial buildings.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Roads and Streets

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 10 shows the degree and kind of soil limitations that affect local roads and streets, shallow excavations, and landscaping.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Landscaping requires soils on which turf, trees, and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Sewage

Table 11 shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (K_{sat}), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, saturated hydraulic conductivity (K_{sat}), depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Saturated hydraulic conductivity (K_{sat}) is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a K_{sat} rate of more than 14 micrometers per second are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Gravel and Sand

Table 12 gives information about the soils as potential sources of gravel and sand. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. Only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness. The ratings are for the whole soil, from the surface to a depth of about 6 feet.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Reclamation Material

Table 13 gives information about the soils as potential sources of reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated *good, fair,* or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the table. Numerical ratings between 0.00 and 0.99 are given after the specified features. These numbers indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments. The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Properties

Table 14 gives the engineering classifications and the range of engineering properties for the layers of each soil in the park.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.”

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 250 millimeters in diameter and 75 to 250 millimeters in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical Soil Properties

Table 15 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the park. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (K_{sat}), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33-kPa or 10-kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (K_{sat}) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in micrometers per second, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in centimeters of water per centimeter of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on the basis of measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; *high*, 6 to 9 percent; and *very high*, greater than 9 percent.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion Properties

Table 16 shows estimates of some erosion factors that affect a soil's potential for different uses. These estimates are given for each layer of every soil for K factors and are given as one rating for the entire soil for the T factor, the wind erodibility group, and the wind erodibility index. Values are reported for each soil in the park. Estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Soil erosion factors Kw and Kf quantify soil detachment by runoff and raindrop impact. These erosion factors are indexes used to predict the long-term average soil loss from sheet and rill erosion under crop systems and conservation techniques. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and K_{sat}. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

The procedure for determining the Kf factor is outlined in Agriculture Handbook 703, "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE),” USDA, Agricultural Research Service, 1997.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments. In horizons where total rock fragments are 15 percent or more, by volume, the Kw factor is always less than the Kf factor.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size. Soil horizons that do not have rock fragments are assigned equal Kw and Kf factors.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the “National Soil Survey Handbook.”

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Total Soil Carbon

Table 17 gives estimates of total soil carbon. Soil carbon occurs as organic and inorganic carbon.

Soil organic carbon (SOC) is carbon (C) in soil that originated from a biological source, such as plants, animals, or micro-organisms. SOC is found in both organic and mineral soil layers. The term “soil organic carbon” refers only to the carbon occurring in soil organic matter (SOM). Soil organic carbon makes up about one-half the weight of soil organic matter. The rest of SOM is mostly oxygen, nitrogen, and hydrogen.

Soil inorganic carbon (SIC) is carbon found in soil carbonates, typically as calcium carbonate layers in the soil or as clay-sized fractions throughout the soil. Carbonates in soils are most common in areas where evaporation rates exceed precipitation, as is the case in most desert environments. Typically, the carbonates accumulated from carbonatic dust or from solution during periods of wetter climates. Soil inorganic carbon also occurs in soils that formed in marl in all regions of the country.

The SOC and SIC contents are reported in kilograms per square meter to a depth of 2 meters or to a representative depth of either hard bedrock or a cemented horizon. The SOC and SIC values are on a whole soil basis, corrected for rock fragments.

SOC can be an indicator of overall soil fertility and soil quality that affects ecosystem function. SOM is the main reservoir for most plant nutrients, such as phosphorus and nitrogen. Managing for SOC by managing for SOM increases the content of these elements and improves soil resiliency.

Soil organic matter binds soil particles together and thus increases soil porosity and water infiltration and allows better root penetration and waterflow into the soil. Greater inflow of water reduces the hazard of erosion and the rate of surface water runoff.

Greater SOC levels improve not only soil quality but also the quality of air and water. Soil acts as a filter and improves water quality. Fertile soils that support plant life remove CO_2 from the atmosphere and increase oxygen levels through photosynthesis. Maintaining the level of soil organic carbon reduces C release into the atmosphere and thus can lessen the effects of global warming.

SIC influences the types of plants that will grow. High SIC levels are commonly associated with a higher soil pH, which limits the types of plants that will thrive.

Like SOM, soil carbonates, the source of SIC, also bind soil particles together. They fill voids in the soil and thus can reduce soil porosity. Compacted soil carbonates may restrict root penetration and waterflow into the soil.

Chemical Soil Properties

Table 18 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the park. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Water Features

Table 19 gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding. *Duration* and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 20 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, saturated hydraulic conductivity (K_{sat}), content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Formation of the Soils

Soil is a natural, three-dimensional body on the earth's surface. Soil properties result from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over a period of time. Although there are many different soils, each soil is the result of the interaction of these five soil-forming factors: time, climate, living organisms, topography, and parent material.

Time refers to the period or duration under which the soil-forming factors have been operating (Jenny, 1941). *Climate* is predominantly the temperature and kind and amount of precipitation. *Living organisms* are the plants, animals, fungi, and microbes living in and on the soil, including humans. *Relief* or *topography* is the shape and elevation of the landscape. It affects internal and external soil properties, such as soil drainage, aeration, susceptibility to erosion, and the soil's exposure to the sun and wind. *Parent material* refers to the source material in which soils formed, which influences the texture, structure, mineralogy, and chemical composition of the resultant soil.

The influence of any one of the soil-forming factors varies, but the cumulative interaction of any of them determines the soil that will form. Because the exact combination and timing of physiochemical and biological reactions that result in a specific soil's development cannot be determined with certainty, soil formation is best understood by observing soil morphological features that serve as indicators of important processes acting on the soil over time. Soil processes are best described as a package of soil-forming factors interacting to produce observable characteristics in consistent, predictable patterns of soil morphology.

Soil-Forming Factors

This section discusses each of the five soil-forming factors in greater detail.

Time

Distinct horizons, or layers, develop in soils as a result of changes over long periods of time. The length of time that the parent material has been in place and exposed to climate and living organisms is generally reflected in the degree of development in the soil profile.

The kinds and arrangement of layers, or soil morphology, are described in terms of color, texture, structure, consistence, thickness, permeability, and chemistry. Soils are classified as young to mature. The relative age of a soil can be determined by the thickness of its horizons, the types of minerals that have developed, and the depth to which soluble material is leached. In terms of geologic time, all of the soils in the park are young, with few exceptions; the area was recently glaciated and then mantled by colluvial and alluvial deposits. The current location of the park headquarters was the site of a glacier 300 years ago. Erosional processes have redistributed some material on active landforms, such as alpine alluvial fans and flood plains. The youngest soils in the park occur on flood plains, alluvial fans, avalanche chutes, and recently deglaciated (within the past 50 years) mountain side slopes and summits.

Climate

Moisture and temperature are the two most important aspects of climate controlling soil properties. Water is involved in most physical, chemical, and biochemical processes in the soil. In addition, the amount of water delivered to the soil influences weathering and leaching conditions with depth. Temperature influences the rate of chemical and biochemical processes (Birkeland, 1984). Climatic zones of Glacier Bay National Park and Preserve are discussed in the section “General Nature of the Survey Area.” These zones are characterized by different patterns of temperature and precipitation.

The maritime relationship, in which temperature generally decreases and precipitation increases as elevation increases, is controlled by the proximity of land masses to the ocean and prevailing wind direction. Orographic effects strongly control the climate where mountain ranges border large water bodies. Evaporated moisture carried by prevailing onshore winds is driven upward when encountering elevated landforms. The moisture condenses and cools as it increases in elevation and starts to precipitate. Where landforms are sufficiently tall and broad enough to slow the passage of the moisture, most (if not all) of it will be lost to precipitation on the windward side. The highest elevations may receive this moisture as snow. As the air passes the peak of the landform it sinks on the leeward side, where it becomes warmer and absorbs moisture downslope, creating a rain shadow (or dry climate). Further inland, the transitional maritime/continental climate prevails, where precipitation is typically abundant throughout the year. Cloudy conditions and moderate to cold temperatures characterize the climate. The average snowfall greatly exceeds the annual snowmelt in many places, as evidenced by the abundance of glaciers and ice fields. At higher elevations, freezing temperatures are likely to occur during any month of the year. Temperature extremes most resemble the continental climate zone, while precipitation amounts tend to range from light (near 250 millimeters) to heavy enough to maintain glaciers. Surface winds range between coastal and interior conditions, including channeled winds.

An example of a soil in the forested maritime zone is Gustavus (fig. 134). The Gustavus soil ranges in elevation from about 5 to 150 feet (2 to 45 meters) above sea level. For this soil, the mean annual air temperature ranges from around 34 to 45 degrees F (1 to 7 degrees C) and the mean annual precipitation ranges from around 33 to 72 inches (850 to 1,815 millimeters). This soil occurs in well drained sandy

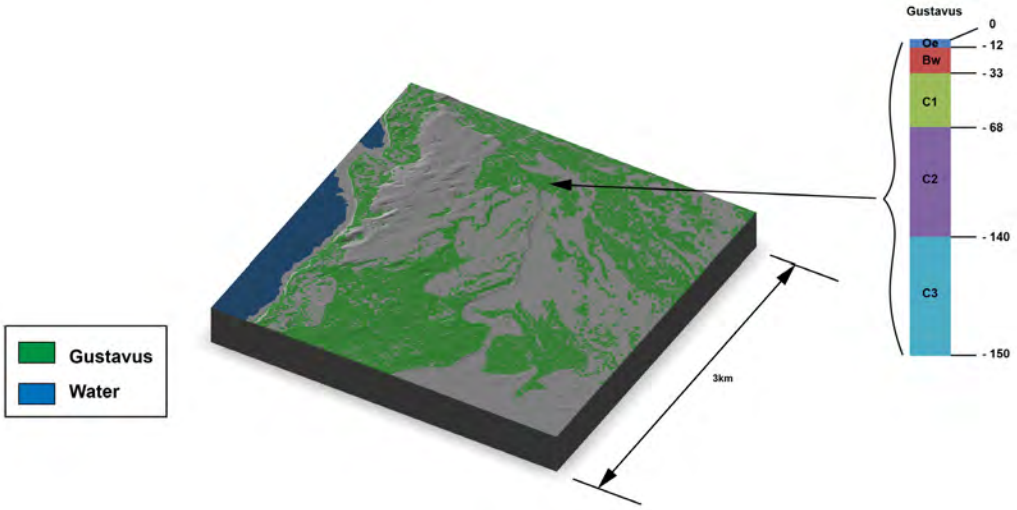

Figure 134.—Block diagram depicting landscape of Gustavus soils (Typic Haplocryepts), which occur extensively in lowland areas.

outwash at the southern border of the park. Due to the acidic nature of the organic material and amount of percolating water received, a cambic horizon develops directly under the organic surface. Free carbonates in the subsoil are believed to be geogenic. The acidic solution at the surface is likely reacting with the parent material at the organic/mineral contact and, with downward movement, creating the cambic horizon. This process proceeds until the carbonate-influenced subsoil causes the solution pH to rise. It is likely that some of the carbonates observed in the lower part of the profile are pedogenic in nature and result from the dissolution and re-precipitation of dissolved ions. With the surplus of water in this system, ions and organic chelates are likely flushed into and through the C2 horizon. The mottles described between a depth of 68 and 140 centimeters are believed to be goethite, an oxyhydroxide common to well drained soils and a product of weathering from overlying horizons.

An example of a soil in the subalpine zone is Typic Haplocryod loamy, high elevation. This soil is at elevations of about 1,148 to 2,460 feet (350 to 750 meters). For this soil, the mean annual air temperature ranges from about 33 to 37 degrees F (1 to 3 degrees C) and the mean annual precipitation ranges from about 205 to 245 inches (5,207 to 6,223 millimeters). This soil occurs in mountain alluvium and colluvium on steep slopes under a predominant shrub community. Low temperatures and surplus moisture in combination with acidic vegetation are likely the main conditions for the soil’s development. A leached horizon lies between the surface mineral horizon and an organic enriched iron and aluminum zone below. Percolating waters moving down through the soil are enriched with metallo-organic complexes, believed to be connected to fulvic acids produced in the O or A horizon. As the water progresses downward, these iron and aluminum chelates are translocated, resulting in their removal (leaching) from the E horizon. As the wetting front continues, those complexes with the higher organic-to-metal ratios precipitate first, whereas those with lower ratios can move to greater depths before encountering conditions for precipitation (Birkeland, 1984). The lack of a Bhs horizon may indicate a low organic-to-metal ratio originating from the leached horizon, or possibly a higher density of micro-organisms directly below the E horizon. Schuylenborgh (1965) suggested microbial action at depth is responsible for the decomposition of organic matter in these complexes, which leave the metal ions free to precipitate as oxides or hydroxides. These oxides and hydroxides of iron and aluminum are recognized as Bs horizons in this soil, due in large part to the pH (less than 5.9) and matrix hue of 7.5YR and value of 4.

An example of a soil in the alpine zone is Lithic Cryorthent, rugged summit. This soil is at elevations of about 1,148 to 3,940 feet (350 to 1,200 meters). For this soil, the mean annual air temperature is 30 to 34 degrees F (- 1 to 1 degrees C) and the mean annual precipitation is 205 to 245 inches (5,207 to 6,223 millimeters). This soil occurs on the tops of bedrock-controlled mountains. It has developed little since deglaciation. Snow covers areas of this soil for most of the season; the soil on average is snow-free for less than 2 months per year. Water movement and root growth are restricted in this shallow soil. Slightly decomposed organic matter from the existing vegetation overlies a similarly thin (3 centimeters thick) A horizon, the only pedogenesis observed. Because of exposure and low amounts of surface organic matter, erosion can be accelerated with the extremes in wind, temperature, and precipitation common to the alpine zone.

Most of the soils in the survey area have a udic soil moisture regime, indicative of seasonally well distributed precipitation. In general, soils in this regime receive more moisture in summer than what is lost through evapotranspiration. Soils in poorly drained or very poorly drained areas have an aquic soil moisture regime. They are saturated close to the surface when soil temperatures are warm enough long enough to allow microbial activity to nearly deplete dissolved oxygen. All soils in the survey area have a cryic temperature regime; i.e., they have a mean annual soil temperature of less than 8 degrees C measured at 50 centimeters below the soil surface.

Living Organisms

In Glacier Bay National Park and Preserve, plants, animals, and micro-organisms contribute to the gains or losses in organic matter, plant nutrients and elements in the soil, and changes in porosity and structure. Biochemical processes cycle nutrients within the soil as micro-organisms break down organic and mineral soil materials. Micro-organisms, such as actinomycetes, algae, bacteria, fungi, nematodes, and protozoa, are a critical component of soil formation. Although identification of specific micro-organisms and correlation to individual soil processes was beyond the scope of this project, the effectiveness of these micro-organisms to decompose rocks and minerals was demonstrated by Glazovskaya (1950). Glazovskaya described fungi as being the most destructive of the soil biota, producing chelating organic acids similar to fulvic and humic acids. Root exudates and microbially degraded organic matter provide the energy that drives these biological weathering processes.

Animals are important factor in the mixing and breakdown of organic materials. Roots, rodents, worms, and insects penetrate the soil and alter its structure. Animals increase porosity by burrowing through the soil and leaving open channels for the movement of water and air. Common burrowing animals in the survey area include ground squirrels and marmots, mostly at the higher elevations. Large mammals include moose, deer, black bears, and brown bears.

Mosses, and to a much lesser extent liverworts and lichens, contribute to soil organic matter in the park. A moss layer was observed at an overwhelming majority of soil survey plots and at times completely covered the mineral soil surface. Common and often abundant mosses in the soil survey area include goose neck moss, rhizomnium moss, Schreber’s big red stem moss, sphagnum moss, and splendid feather moss. Lack of abundant moss ground cover is generally an indicator of younger, minimally developed soils. It suggests disturbances such as recent glaciation, flooding, and avalanche. Under dense western hemlock-Sitka spruce forests and in bogs, mossy plant material commonly makes up a large proportion of the organic cap covering mineral soils and bedrock. The presence of a continuous moss layer on the soil surface is indicative of soil stability and suggests that soil formation processes, such as braunification and podzolization, are active. Where there is a continuous moss in concave positions on hillslopes, the process of andisolization occurs.

Following glacial retreat, vascular plants profoundly affect soils in the park largely through their contribution to soil stability and organic matter content. These plants include forbs, graminoids, shrubs, and trees. An early major phase in soil development involves its stabilization through the establishment of open and often sparsely vegetated communities. The early successional plant communities commonly consist of various willows, forbs, mosses, and nitrogen-fixing shrubs like Drummond’s mountain-avens and Sitka alder. In as little as 12 years after glacial retreat, these open plant communities give way to dense and tall Sitka alder thickets. As Sitka alder gains dominance, mineral soil organic content and nitrogen levels increase rapidly (Crocker and Major, 1955; Bormann and Sidle, 1990) and soil pH decreases rapidly due to acidic leaf litter. In 35- to 50-year stands of alder, acidic leaf litter decreased glacial till pH from 8.0 to 5.0 (Crocker and Major, 1955). In 80 to 120 years, Sitka alder thickets are eventually replaced by forests dominated by Sitka spruce. As Sitka spruce becomes dominant, soil nitrogen levels decrease but above-ground organic material increases rapidly (Crocker and Major, 1955; Bormann and Sidle, 1990). In 120 years after glacial retreat, above-ground organic material in Sitka spruce stands was 13 to 20 centimeters thick (Crocker and Major, 1955). In as little as 120 years, vascular plants transformed barren glacial till, significantly impacting soil nitrogen, mineral soil organic content, surface organic layer thickness, and soil pH. The soils related to the

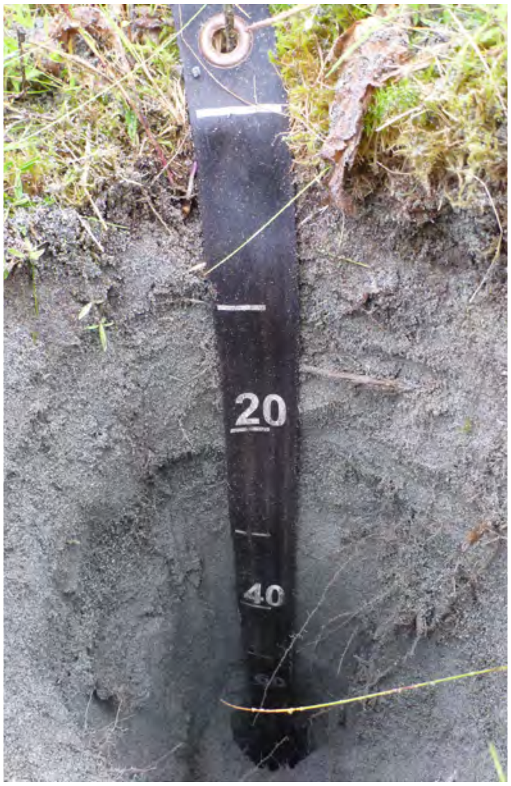

Figure 135.—Profile of the Murkbay series. Scale is in cm.

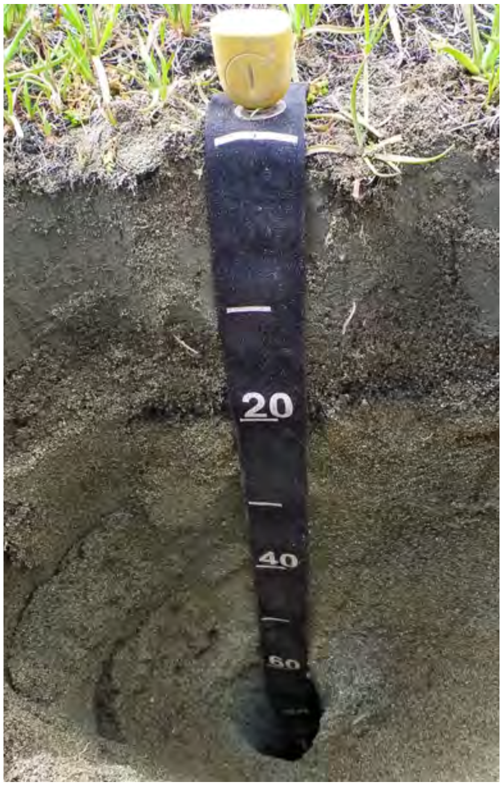

Figure 136.—Profile of the Puffin series. Scale is in cm.

chronosequence of glacial retreat on plains, hillslopes, and mountain slopes in the park include Bearisland, Fossil, Gustavus, Nunatak, Skarn, and Tyeen soils.

While much of the park currently is or was recently glaciated, there are other unglaciated or older surfaces that support a wide array of plant communities on various soil types. The coastal plain and its shore complexes largely consist of tidal marshes that commonly support Lyngbye's sedge meadow (on Astrolable and Beartrack soils) or drier positions like beach ridges that support American dunegrass communities (on Murkbay and Fingerock soils) (fig. 135). Flood plains can be broken into low positions, which flood frequently, and high positions, which flood less frequently. Low flood plains commonly support alder and Sitka willow scrub (on Puffin soils) (fig. 136), while high flood plains tend to have balsam poplar and Sitka spruce forests (on Bertha soils) (fig. 137). At lower elevations, dry soils (including Bergbay, Foad, and Kaknau soils) on the slopes of plains, hills, and mountains tend to support productive stands of western hemlock and Sitka spruce. Wetter soils (including Kutskloh and Toyatte soils) on these same slopes support less productive stands of western hemlock, mountain hemlock, and Alaska cedar (fig. 138). Areas too wet for forest growth have thick peaty soils (such as Kashoto soils) that commonly support ericaceous shrub, sedge, and Sphagnum moss communities (fig. 139). The subalpine and alpine zones are typically at elevations above 500 meters. Subalpine zones support plant communities of tall alder scrub and bluejoint-forb meadows (on Typic Humicryepts and Typic Haplocryods); alpine zones support plant communities of ericaceous dwarf scrub (on Lithic Cryorthents) (fig. 140).

Topography

Topography influences the degree of downslope movement of materials, the collection or dispersion of water, flooding, and soil temperature and moisture relations

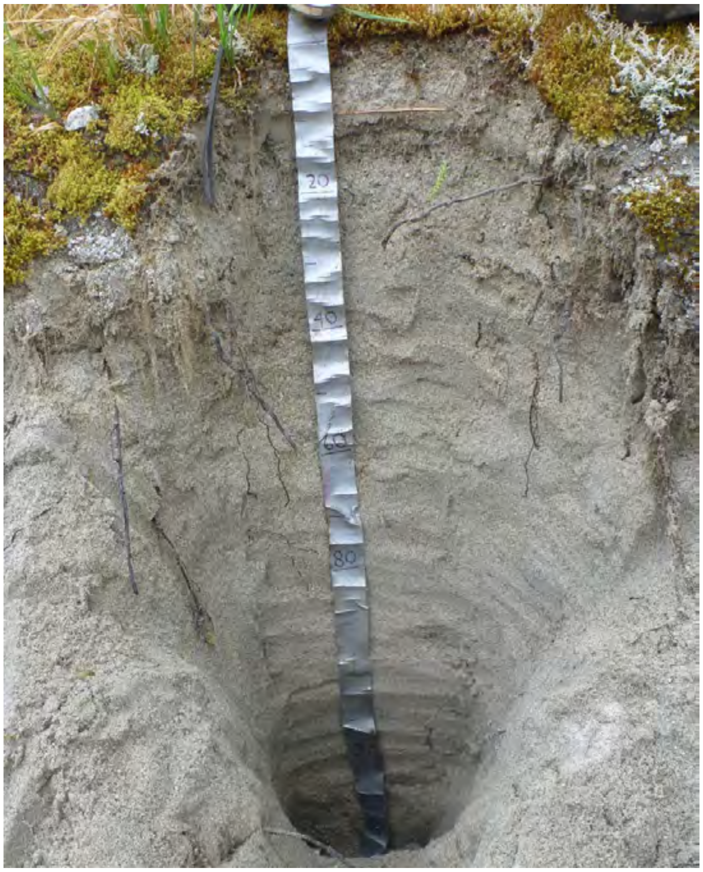

Figure 137.—Profile of the Bertha series. Scale is in cm.

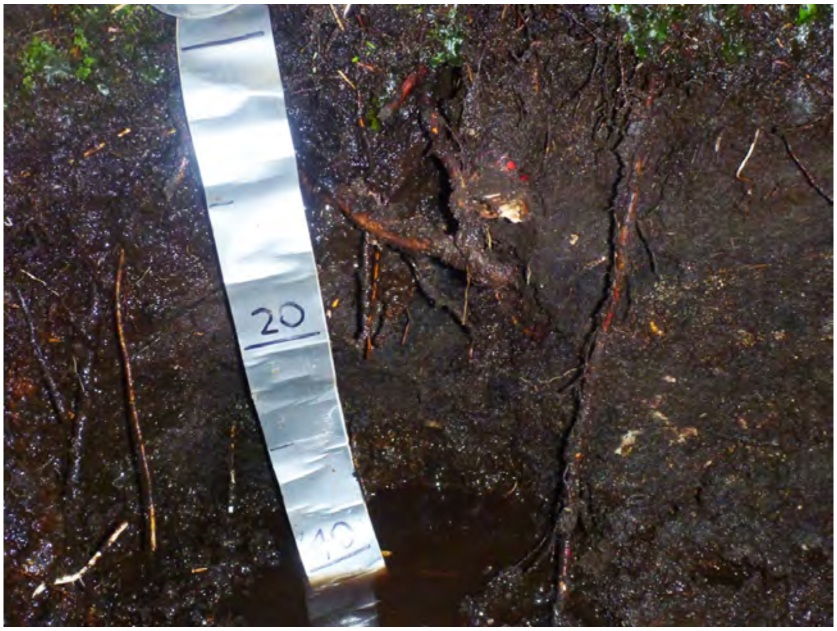

Figure 138.—Profile of the Kutskloh series. Scale is in cm.

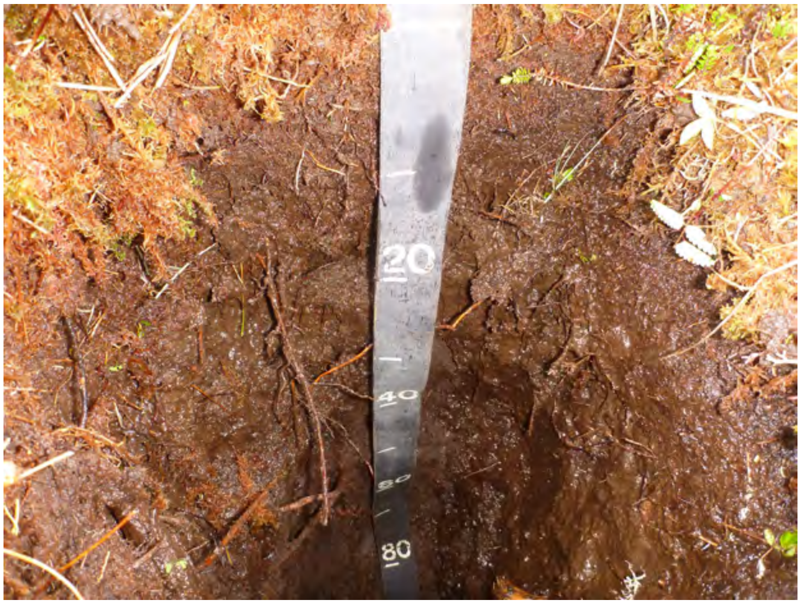

Figure 139.—Profile of the Kashoto series. Scale is in cm.

associated with aspect, elevation change, and snow distribution. Slope steepness is one example of topographic influences on soil formation. Steeper slopes are inherently unstable and more susceptible to downslope movement, conditions unfavorable to soil weathering and the development of well defined soil horizons. For example, on steep mountains above about 500 meters, barren rock outcrops and scree slopes are dominated by colluvial processes and there is no apparent soil development. Topography acts in combination with one or more of the other soil-forming factors. For example, some soils formed on mountains (topography) have a continuous mat of vegetation (living organisms) and a surplus of moisture (climate). Below about 500 meters, even on very steep slopes, colluvial processes are offset in some areas by the stabilizing effects of dense root and vegetation mats formed by Sitka alder, mountain heather (*Cassiope* spp.), and other dwarf ericaceous shrubs. The surplus water from melting snow and rain provides a solution for acids generated by decaying vegetation. These acids assist in the horizontal and vertical transport of iron and aluminum chelates and oxyhydroxides. Soils with a very thick organic surface layer on steep slopes have a thin organic surface horizon overlying an equally thin mineral A horizon. The combination of upslope variability with the rooting characteristics of the vegetation directly affects the formation of these surface organic accumulations. The slopes with greater organic buildup receive a majority of their soil moisture from throughflow as opposed to runoff. Where runoff dominates, organic mats are stripped away or remain thin.

Topography and parent material combine to provide distinctive soil conditions on steep alpine mountain slopes in the park. On steep herbaceous mountain backslopes and footslopes, colluvial processes mixed gravelly scree from the steep bedrock exposures above with residuum from weathering parent materials in more stable positions. Properties associated with these gravelly colluvial soils include low available water and cation-exchange capacities, properties that favor pioneering plant communities. The Bearisland series is an example of these soils (fig. 141).

Topography also influences the accumulation of water on the landscape. On various landforms within the alpine and subalpine zones, snow drifts into swales and persists

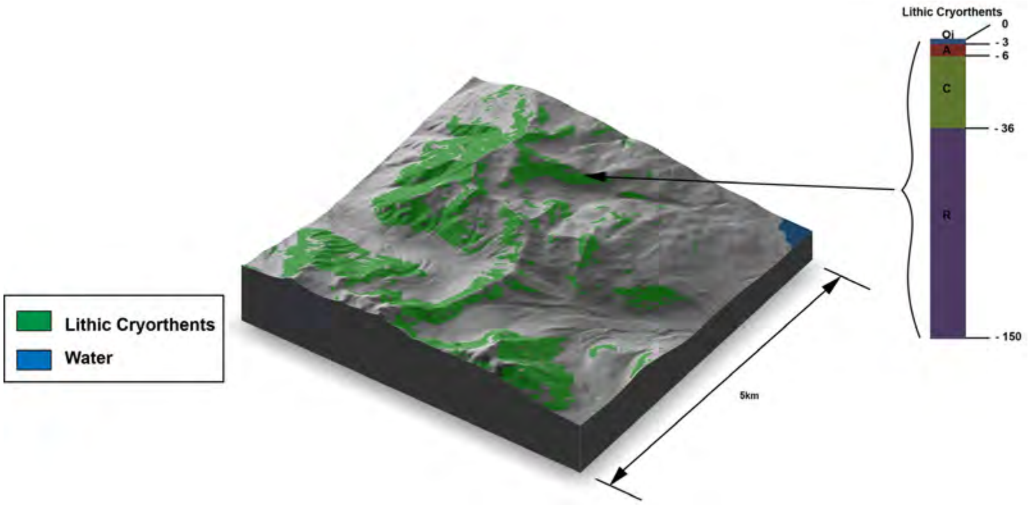

Figure 140.—Block diagram depicting landscape of Lithic Cryorthents on rugged summits, which occur within map units 20HIA and 20HIS in the survey area.

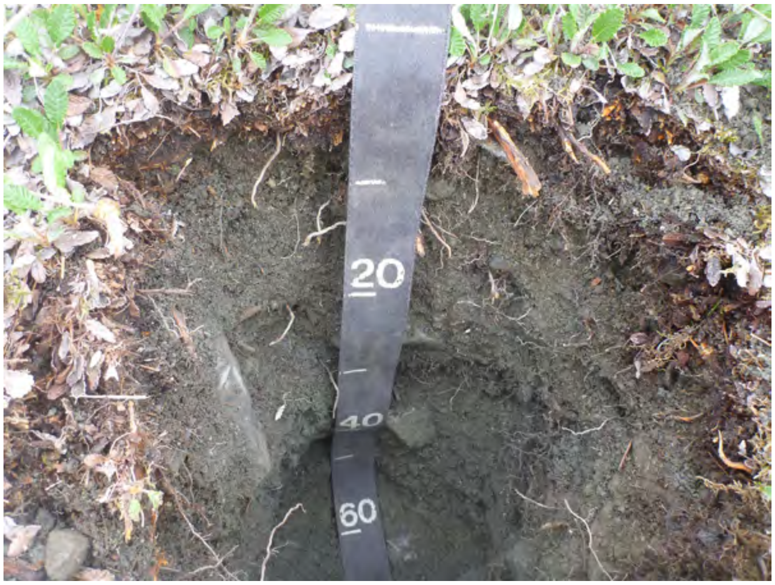

Figure 141.—Profile of the Bearisland series. Scale is in cm.

into late spring and early summer. As drifts melt they provide a steady discharge of water, which saturates soils downslope, enhancing anaerobic conditions and allowing thick organic-rich mineral horizons to form. The positions promoting snow accumulation restrict plant communities to select species. These sites can be identified by vegetation, commonly partridgefoot, Cooley's false buttercup, and Eschscholtz's buttercup (Jaques, 1973). Common species under less-persistent snowbeds include western moss heather, yellow mountainheath, mountain hairgrass, narcissus anemone, western buttercup, pioneer violet, and Sierra shootingstar (Jaques, 1973; Boggs et al., 2007).

Elsewhere, closed depressions on all landforms pond water, promoting anaerobic conditions and the accumulation of thick organic mats (see figure 139). Flooding is another aspect of topography. The texture of flood deposits and the type of vegetation are influenced by flooding frequency and height above active river channels. Areas adjacent to active channels are regularly scoured by high-velocity floodwaters, and soils in these areas are gravelly (see figure 136) with fluctuating water tables near the surface. Topographic-vegetation relationships in these areas include young willow scrub and herbaceous communities that have established between flooding events or survived previous events. In more elevated and less frequently flooded areas, water velocity of overbank flooding is slowed by the dense stands of mixed tall alder-willow scrub; in these areas alluvium consists of finer textured stratified sandy and silty deposits.

Topographic exposure also influences the type of soils that form. In mountainous alpine areas, the vegetation on leeward mountain slopes, where snow accumulates, is very different from that on exposed windblown slopes. On windblown exposures within the alpine zone of the park, the light green color characteristic of ericaceous dwarf scrub (refer to ecological site R222XY356AK) contrasts with the darker green associated with diverse meadows and ericaceous dwarf scrub, which occur where snow drifts and persists into late spring (refer to ecological site R222XY357AK). Soil differences on these two sites include slightly thicker organic mats and darker mineral surface layers in the moister sites under heath and forb species.

Parent Material

Parent material is the unconsolidated and chemically weathered mineral or organic material in which soils form. Organic materials dominantly consist of non-living, partially to highly decomposed plant materials. Most soils in the park are covered by surface mats of organic materials. The exceptions are soils of active flood plains, tidal marshes, avalanche chutes, deltas, drainageways, and exposed beaches and marine terraces. These soils are predominantly coarse textured Cryaquents, Cryorthents, Cryopsamments, and Cryofluvents and the slightly more developed Cryaquepts and Haplocryepts. The thickness of organic materials varies widely. On steep till and colluvial slopes, more than 50 percent the organic mat is discontinuous and generally less than 10 centimeters thick and many soils have mats less than 3 centimeters thick. These soils commonly have angular fragments throughout as a result of downslope movement by gravity (colluviation). On intermediate slopes and gently sloping summits of hills and mountains, the organic mats vary from 3 centimeters to more than 30 centimeters in thickness. On muskegs and in depressions, the organic mats range in thickness from about 35 centimeters to more than 150 centimeters.

On well drained mineral soils, a dynamic equilibrium exists between production and decomposition of organic material. Percolation of water through mineral soils removes soil bases and acidifies the soil. Acidic surface conditions favor both the establishment of moss and the preservation of surface litter from vascular plants. Long-term preservation of organic materials is enhanced by low soil temperatures, which suppress microbial activity. However, significant accumulations of organic materials are rarely observed in these well drained soils due to high organic turnover from oxidation. Organic mats on well drained mineral soils are typically only a few centimeters thick and rarely exceed 15 centimeters in thickness.

The composition of rock types, if there is adequate time for weathering and translocation, controls soil formation to an unusual degree. Podzolization occurs in sandy soils, which tend to be poor in basic cations such as calcium, magnesium, potassium, and sodium. These cations increase alkalinity, thereby preventing the translocation of iron and aluminum necessary for podzolization. In map units 20VBA and 20FPC, Typic Haplocryods are associated with convex, concave, and linear slopes on plains (fig. 142). Soils that formed on limestone are another example of pedogenesis controlled by rock type; fine grained residual soils with or without carbonate commonly overlie bedrock with sharp contact in the park. In places where there is not enough limestone dissolved to result in the fine grained material, the fines are likely of eolian origin (wind deposits) or are colluvial deposits from higher terrain.

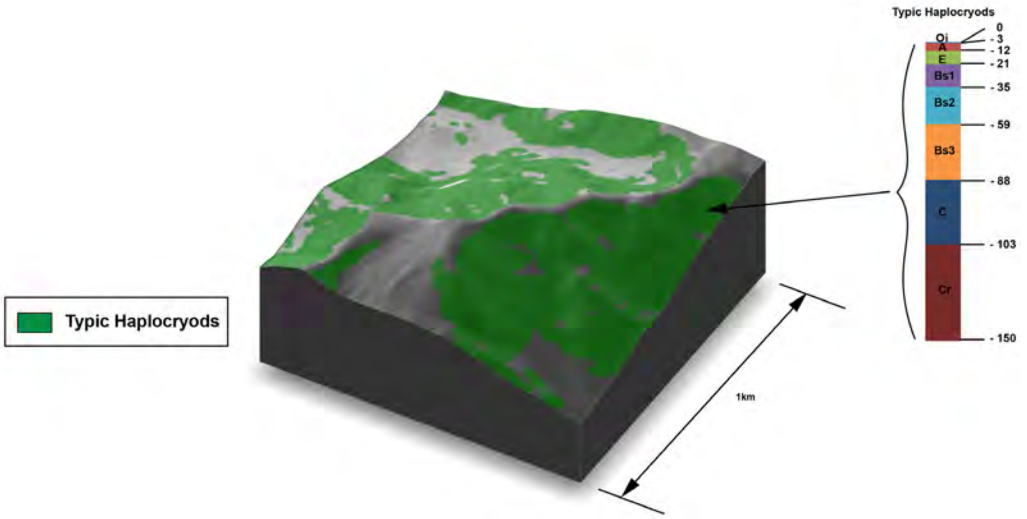

Figure 142.—Block diagram depicting landscape of Typic Haplocryods at high elevation, which occur within map unit 20HIS in the survey area.

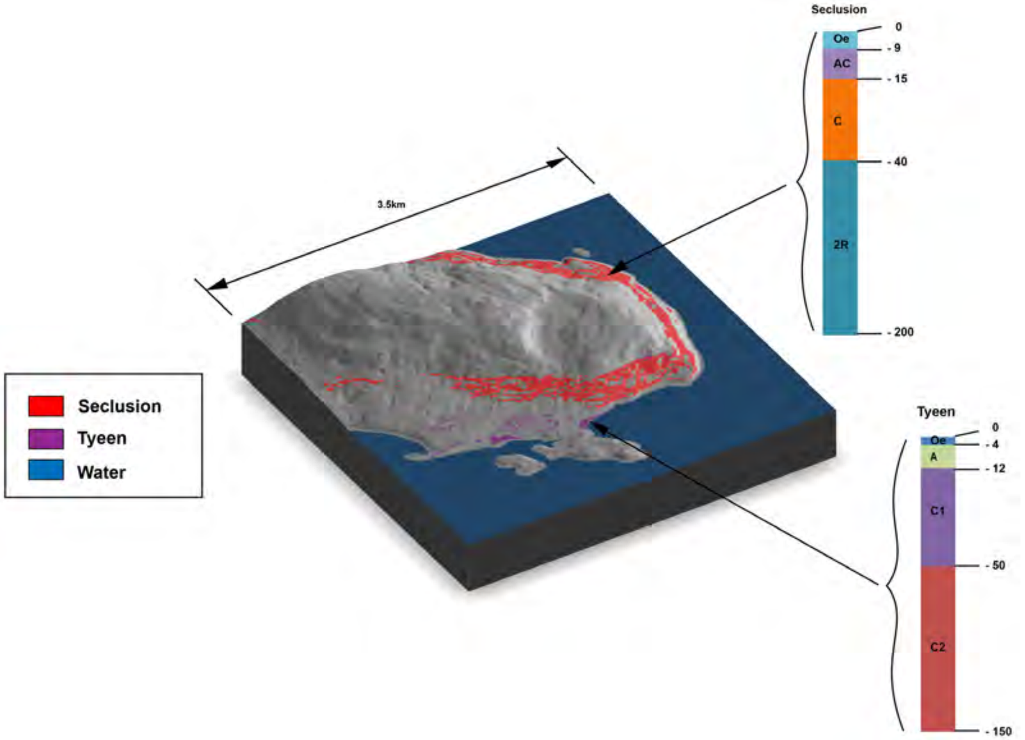

Figure 143.—Block diagram depicting landscape of Seclusion soils (calcareous Lithic Cryorthents) and Tyeen soils (calcareous Typic Cryorthents).

In map units 20HI3 and 20HIN, calcareous Lithic Cryorthents (Seclusion soils) and calcareous Typic Cryorthents (Tyeen soils) are associated with escarpments, glacial valley floors, and some islands recently exposed following glacial retreat (fig. 143). Another example of parent material control on soil development is volcanic airfall deposits. Soils with this parent material are identified by less than 25 percent (by weight) organic carbon, low bulk densities (less than 0.9 g/cm^3), or glass content in the coarse silt to very coarse sand fraction and by specific criteria for phosphate, iron, and

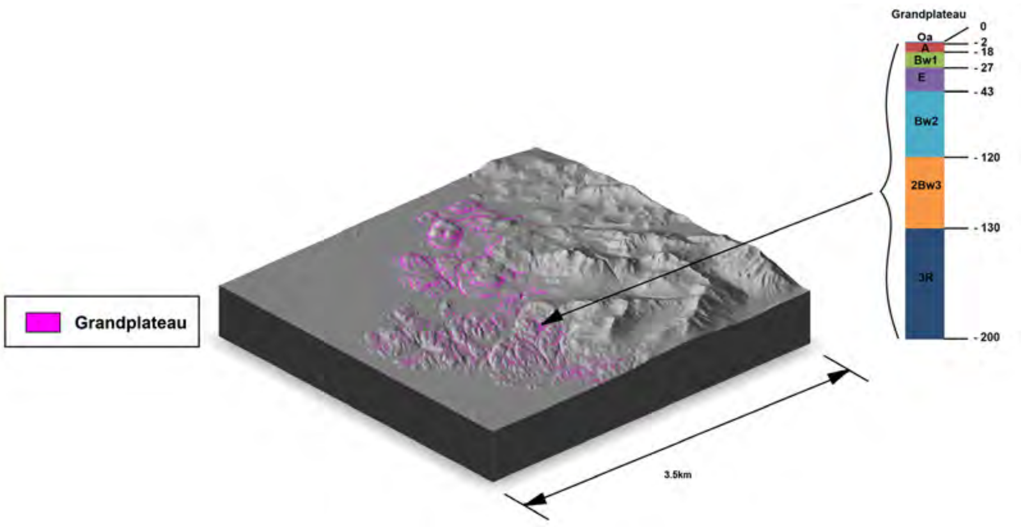

Figure 144.—Block diagram depicting landscape of Grandplateau soils (Typic Cryaquands), which occur in map units 20HI5 and 20HID in the survey area.

aluminum as determined by laboratory analysis. In map units 20HI5 and 20HID, Typic Cryaquands (Grandplateau soils) are associated with concave to linear slopes on hills in the park (fig. 144).

Soil Processes and Indicators

Soil processes are a combination of physiochemical and biological reactions that transform material into soil horizons. Combinations of the elementary processes—solution, oxidation, reduction, hydrolysis, hydration, chelation, ionic substitution, synthesis, and crystallization—are needed for soil development. Combinations in which a particular process is dominant or the rate of a particular process is distinct are: colluviation, fluvial processes, hydromorphism, braunification, and podzolization (Wilding et al., 1984).

Colluviation is a depositional process resulting from mass wasting or overland flow. Sediment deposited by mass wasting generally is unsorted and non-stratified. Individual particles are not rounded. These characteristics distinguish colluvium from sediment deposited by fluvial processes (Longwell et al., 1969). Colluvial material includes talus and solifluction deposits. In this survey area, colluviation is enhanced by extreme temperature variations throughout the year. Multiple freeze-thaw cycles fracture exposed bedrock and destabilize the slopes on which the rock fragments accumulate. This process is extensive throughout the mountains and along river escarpments. Field indicators of this process include long plain slopes or conical features that extend downslope from steep exposures of bedrock to the base of the slope. Soils within colluvial cones consist of nonsorted material with 30 percent angular rock fragments or more, by volume. Soils on steep colluvial slopes are characterized by an absence of developed horizons and a lack of vegetation because of the unstable surface. On more stable, or metastable, colluvial slopes, a continuous organic mat underlain by an A-Bw-C-R horizon sequence is common.

Fluvial processes include erosion, transportation, and deposition of alluvium by water. These processes are a good example of how topography and time influence soil formation. Soils that are subject to periodic flooding exhibit minimal horizon development. Along low-gradient streams, low-velocity floodwaters deposit stratified sandy and silty sediment. Along higher gradient streams, such as those along the upper reaches of the Alsek River, high-velocity floodwaters deposit gravelly and cobbly alluvium as channel deposits. Landscape indicators of fluvial processes include the presence of barren or sparsely vegetated gravel bars, channels, and alluvial flats adjacent to active river channels and debris, ice-gouged trees, and watermarked vegetation. Vegetation indicators of fluvial processes include young stands of Sitka willow and alder shrub, herbaceous vegetation, or balsam poplar forests adjacent to stream channels. Soil indicators include stratification of sandy and silty sediment and buried organic layers and relatively high soil reaction (pH) compared to soils in adjacent upland positions.

Hydromorphism is associated with near-surface saturated conditions. This process occurs extensively throughout the survey area. It is another example of how topography influences soil formation. Water collects locally in small, concave micro-positions on all landforms above restrictive soil layers with low permeability, such as bedrock. This process includes the chemical reduction, mobilization, and movement of soluble minerals and the formation of a thick organic mat on the surface under saturated anaerobic conditions. Subsequently, iron and manganese, the primary pigments in mineral soils, are converted to reduced forms. These reduced compounds are mobile in the soil solution and are easily stripped from the soil. Soils stripped of mineral pigments have redoximorphic depletions (a neutral gray to bluish color). A soil morphological feature indicative of this process is the Cg horizon. The mobilized minerals are transported through the soil by ground water to an oxidized zone. The resulting mineral oxidation and precipitation form redoximorphic concentrations, which are yellowish to reddish. In areas where the water table fluctuates near the surface, the soil environment commonly alternates between reduced and oxidized states and the soils commonly display a complex mottled pattern of both reddish oxidized colors (concentrations) and grayish reduced colors (depletions). Permanently saturated soils commonly have a thick organic layer. The accumulation and stability of the organic deposits in these soils is attributed to prolonged saturation and the associated anaerobic environment.

There are two general groups of hydromorphic soils in the survey area: aquifer-wet soils and topographically wet soils. Aquifer-wet soils include those on flood plains and in broad depressions. A local or regional water table is present within the soil profile. Evidence of aquifer-wet or extensive aquifer systems include the presence of multiple oxbows and cutoff meanders on flood plains. Soil indicators of hydromorphism on these landforms include a water table near the surface during much of the year, abundant redoximorphic depletions and concentrations, and a thick, saturated organic horizon. Vegetation indicators include a prevalence of wet sedge meadow or willow/sedge meadow.

Topographically wet soils include those in open swales and closed depressions, where the source of water is run-in from adjacent uplands or precipitation. Water is near the surface for prolonged periods because of the relatively low rate of permeability in the underlying material. Topographically wet mineral soils in swales or nivation hollows with snowbeds are common in the alpine and subalpine zones. Saturated conditions result from melting snowdrifts that persist into summer and saturate soils downslope. Soils in these depressions commonly are slightly more nutrient-rich than adjacent well drained soils and have a water table at or near the surface sometime during the growing season. Soil indicators of hydromorphism in these soils include a thick organic layer at the surface or an organic-rich mineral layer that is 8 inches or more thick. Soil indicators of these seasonally saturated, topographically wet soils include a thick, dark-colored mineral surface horizon and faint reddish redoximorphic concentrations in the subsoil.

Braunification is the release of iron from primary minerals by oxidation or hydration, which gives the soil matrix a brownish, reddish brown, or red color (Wilding et al., 1984). This process is a good example of how time and topography influence soil formation. It is common on vegetated mountain slopes, terraces, plains, and hills throughout the uplands of the survey area. The process is common in soils on relatively stable surfaces that are not influenced by flooding or excessive downslope movement of soil material. The downward movement of water through the soil profile and free movement of oxygen promote the weathering of primary iron minerals. Surface stability promotes the removal of excess basic metal cations from the soil through leaching and plant use. This normally is accompanied by a reduction in soil reaction (pH) in the upper part of the soil. The weathering and translocation of primary soil minerals, including iron and organic matter, accompany soil acidification. Indicators of braunification include the presence of a continuous organic mat on the surface or a cover of dwarf shrub and a thin, dark surface mineral horizon, which result from surface stability. Additional soil indicators include the presence of a light brown to yellowish brown subsurface layer, a result of the weathering and translocation of primary soil minerals. In addition, soil reaction gradually increases as depth increases.

Podzolization includes the chelation and chemical migration of aluminum and iron and organic matter downward in the soil profile, which leaves silica in the leached layer (Wilding et al., 1984). This process is a good example of how climate and parent material influence soil formation. The alteration and translocation normally occur under extremely acid soil conditions, which generally are associated with high amounts of precipitation. Indicators of this process include a thin, gray, leached E horizon over a brown Bs horizon. Podzolization is dependent on specific site and soil properties, including coarse texture and the presence of hemlock, shrub birch, or Sitka alder, which are known soil acidifiers.

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the “National Soil Survey Handbook” (available in local offices of the Natural Resources Conservation Service or on the Internet).

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial fan. A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Association, soil. A group of soils or miscellaneous areas geographically associated in a charateristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as cm of water per cm of soil. The capacity, in cm, in a 150-cm profile or to a limiting layer is expressed as:

Very low	0 to 7.5
Low	7.5 to 15.0
Moderate	15.0 to 22.5
High	22.5 to 30.0
Very high	more than 30.0

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane. A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle-size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. An informal term loosely applied to various portions of a flood plain.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Break. A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Breast height. An average height of 4.5 feet (137 cm) above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Butte. An isolated, generally flat-topped hill or mountain with relatively steep slopes and talus or precipitous cliffs and characterized by summit width that is less than the height of bounding escarpments; commonly topped by a caprock of resistant material and representing an erosion remnant carved from flat-lying rocks.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caliche. A general term for a prominent zone of secondary carbonate accumulation in surficial materials in warm, subhumid to arid areas. Caliche is formed by both geologic and pedologic processes. Finely crystalline calcium carbonate forms a nearly continuous surface-coating and void-filling medium in geologic (parent) materials. Cementation ranges from weak in nonindurated forms to very strong in indurated forms. Other minerals (e.g., carbonates, silicate, and sulfate) may occur as accessory cements. Most petrocalcic horizons and some calcic horizons are caliche.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Canyon. A long, deep, narrow valley with high, precipitous walls in an area of high local relief.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Cement rock. Clayey limestone used in the manufacture of cement.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Unconsolidated, unsorted earth material that is transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. See Redoximorphic features.

Conglomerate. A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches (25 cm and 100 or 200 cm).

Corrosion (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cryoturbate. A mass of soil or other unconsolidated earthy material moved or disturbed by frost action. It is typically coarser than the underlying material.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches (152 cm) deep over bedrock; deep soils, 40 to 60 inches (100 to 152 cm); moderately deep, 20 to 40 inches (50 to 100 cm); shallow, 10 to 20 inches (25 to 50 cm); and very shallow, less than 10 inches (25 cm).

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Dolomite. A carbonate sedimentary rock consisting mostly of the mineral dolomite.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Draw. A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Earthy fill. See Mine spoil.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters (79 inches) are saturated.

Eolian deposit. Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Epipedon. A horizon that forms at or near the surface in which most of the rock structure has been destroyed. It is darkened by organic matter or shows evidence of eluviation, or both.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters (79 inches) of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (accelerated).—Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion (geologic).—Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion pavement. A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface. A land surface shaped by the action of erosion, especially by running water.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Fan remnant. A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, that have been either dissected or partially buried.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called normal field capacity, normal moisture capacity, or capillary capacity.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. Flood-plain steps may occur individually or as a series of steps.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Foothills. A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Gyp (or gyps). A synonym of gypsum.

Gypsiferous. Gypsum-bearing; e.g., gypsiferous shale.

Gypsum. A widely distributed mineral consisting of aquated calcium sulfate. It is the commonest sulfate mineral. It is frequently associated with halite and andhydrite in evaporites, forming thick, extensive beds interstratified with limestone, shale, and clay (especially in rock of Permian or Triassic age). Gypsum is soft and white or colorless when pure. It is commonly used as a soil amendment.

Halite. A native salt occurring in massive, granular, compact, or cubic-crystalline forms. It has a distinct salty taste and is typically colorless. Synonyms: common salt, rock salt.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet (304 meters) above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. See Redoximorphic features.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Landslide. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Low strength. The soil is not strong enough to support loads.

Major land resource areas (MLRAs). Large, geographically associated areas important in statewide agricultural planning as well as in interstate, regional, and national planning.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also in more saline environments.

Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses. See Redoximorphic features.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Mesa. A broad, nearly flat-topped and commonly isolated landmass bounded by steep slopes or precipitous cliffs and capped by layers of resistant, nearly horizontal rocky material. The summit width is characteristically greater than the height of the bounding escarpments.

Mine spoil. An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Miscellaneous area. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many*; size—*fine, medium,* and *coarse*; and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. Fine indicates less than 5 millimeters (about 0.2 inch); medium, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and coarse, more than 15 millimeters (about 0.6 inch).

Mountain. A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.

Munsell notation. A designation of color by degrees of three simple variables—*hue, value,* and *chroma*. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. See Redoximorphic features.

Nose slope (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, hardpan, fragipan, claypan, plowpan, and traffic pan.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in micrometers per second, are as follows:

Impermeable	less than 0.01 µm/s
Very slow	0.01 to 0.42 µm/s
Slow	0.42 to 1.41 µm/s
Moderately slow	1.41 to 4.23 µm/s

Moderate	4.23 inch to 14.11 µm/s
Moderately rapid	14.11 to 42.36 µm/s
Rapid	42.36 to 705.00 µm/s
Very rapid	more than 705.00 µm/s

Petrogypsic horizon. A continuous, strongly cemented, massive, gypsic horizon cemented by calcium sulfate. It is impenetrable to roots but can be chipped with a spade when dry. Dry fragments do not slake in water.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pisolite (sediment). (a) A sedimentary rock, typically limestone, consisting mostly of pisoids cemented together. (b) A term often used for a pisolith, or one of the spherical particles of a pisolite.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Playa. The generally dry and nearly level lake plain that occupies the lowest parts of closed depressions, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff. Playa deposits are fine grained and may or may not have a high water table and saline conditions.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proximal (sedimentology). Refers to a sedimentary deposit consisting of coarse clastics nearest to the source area.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:

   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*

   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*

   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.

2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:

   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*

   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).

3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser. The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, gravel, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Saturated hydraulic conductivity (K_{sat}). See Permeability.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates,or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune. A small, streamlined dune that forms around brush and clump vegetation.

Side slope (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Slickensides (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slope alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth’s surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. Structureless soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Substratum. See Underlying material.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Rock fragments of any size or shape (commonly coarse and angular) derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose broken rock formed chiefly by falling, rolling, or sliding.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam,* *silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Toeslope. The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread. The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Underlying material. The part of the soil below the solum.

Valley fill. The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth’s surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Tables

Table 1.—Legend

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20AF1: Muirpoint-Puffin complex, 5 to 20 percent slopes	Muirpoint	65
	Puffin	15
	Bertha	10
	Riverwash	10
20AF2: Entisols, alluvial fans, 0 to 35 percent slopes	Entisols, alluvial fans, occasionally flooded	90
	Cryods, alluvial fans	10
20CL1: Strawberry-Fingerock complex, 0 to 5 percent slopes	Strawberry	60
	Fingerock	20
	Beartrack	10
	Murkbay	10
20CP1: Oberlin-Perouse, frequently ponded-Perouse complex, 0 to 2 percent slopes	Oberlin	55
	Perouse, frequently ponded	25
	Perouse	15
	Scidmore	5
20CP2: Beaches-Monashka-Murkbay complex, 0 to 3 percent slopes	Beaches	50
	Monashka	25
	Murkbay	25
20CPF: Icy-Excursion complex, 0 to 1 percent slopes	Icy	45
	Excursion	40
	Strawberry	10
	Astrolable	5
20ED1: Gustavus-Bartlettcove complex, 5 to 20 percent slopes	Gustavus	75
	Bartlettcove	20
	Scidmore	5

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20ED2: Beardslee-Monashka complex, 0 to 15 percent slopes	Beardslee	60
	Monashka	40
20FP1: Drybay-Tidalwave complex, 0 to 8 percent slopes	Drybay	70
	Tidalwave	30
20FP2: Bertha-Puffin complex, 0 to 15 percent slopes	Bertha	55
	Puffin	30
	Riverwash	10
	Water, nonsaline	5
20FP3: Tidalwave-Ashmun, frequently ponded-Drybay complex, 0 to 10 percent slopes	Tidalwave	60
	Ashmun, frequently ponded	25
	Drybay	15
20FPL: Cryaquepts-Typic Cryaquents-Water complex, estuaries, 0 to 5 percent slopes	Cryaquepts	40
	Typic Cryaquents, gravelly, very poorly drained	30
	Water	30
20FPM: Typic Cryaquents, flood plains, 0 to 5 percent slopes	Typic Cryaquents, silty	85
	Aquic Cryorthents, sandy	10
	Water	5

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20FPY: Oxyaquic Cryorthents-Typic Cryaquents association, flood plains, 0 to 5 percent slopes	Oxyaquic Cryorthents, sandy or gravelly	60
	Typic Cryaquents, sandy or gravelly	25
	Typic Cryopsamments, rarely flooded	10
	Water	5
20FPZ: Typic Cryorthents-Typic Cryofluvents association, flood plains, 0 to 5 percent slopes	Typic Cryorthents, gravelly	60
	Typic Cryofluvents	30
	Typic Haplocryods, sandy or gravelly	10
20GP1: Gustavus-Ibach-Scidmore complex, 0 to 30 percent slopes	Gustavus	35
	Ibach	35
	Scidmore	25
	Water, nonsaline	5
20HI1: Foad-Boussole complex, 25 to 65 percent slopes	Foad	65
	Boussole	20
	Kashoto	10
	Rock outcrop	5
20HI2: Kashoto-Foad-Kutskloh complex, 2 to 55 percent slopes	Kashoto	35
	Foad	25
	Kutskloh	20
	Boussole	10
	Charpentier	10

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20HI3: Polkapenn-Dagelet-Nunatak complex, 20 to 65 percent slopes	Polkapenn	35
	Dagelet	25
	Nunatak	20
	Rock outcrop	10
	Seclusion	10
20HI5: Kaknau-Tricklake complex, 20 to 65 percent slopes	Kaknau	45
	Tricklake	35
	Crillon	10
	Grandplateau	10
20HIB: Drybay-Kaknau-Vivid complex, 5 to 35 percent slopes	Drybay	35
	Kaknau	30
	Vivid	25
	Water, nonsaline	10
20HID: Grandplateau-Crillon complex, 10 to 60 percent slopes	Grandplateau	55
	Crillon	35
	Kaknau	10
20HIE: Kashoto-Kutskloh-Wachusett complex, 5 to 55 percent slopes	Kashoto	40
	Kutskloh	30
	Wachusett	20
	Maquinna	10
20HIF: Kashoto-Wachusett complex, 2 to 25 percent slopes	Kashoto	45
	Wachusett	35
	Kutskloh	10
	Maquinna	10
20HIN: Polkapenn-Nunatak complex, 20 to 60 percent slopes	Polkapenn	40
	Nunatak	30
	Escures	10
	Rock outcrop	10
	Tyeen	10

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20HIS: Lithic Cryorthents and Typic Humicryepts, 76 to 140 percent slopes	Lithic Cryorthents, rugged summit	46
	Typic Humicryepts, high elevation	44
	Typic Haplocryods, loamy, high elevation	10
20IS1: Cenotaph-Water, saline-Beaches complex, 0 to 5 percent slopes	Cenotaph	35
	Water, saline	35
	Beaches	20
	Lituya	10
20LF1: Abyss-Astrolable complex, 0 to 5 percent slopes	Abyss	55
	Astrolable	30
	Scidmore	10
	Riverwash	5
20MD1: Gustavus-Perouse complex, 0 to 15 percent slopes	Gustavus	70
	Perouse	20
	Scidmore	10
20MF1: Geikie-Gustavus-Scidmore complex, 0 to 8 percent slopes	Geikie	55
	Gustavus	30
	Scidmore	15
20MF2: Gustavus-Geikie complex, 0 to 10 percent slopes	Gustavus	60
	Geikie	30
	Scidmore, drained	10
20MT1: Bearisland-Kadachan-Rubble land complex, 15 to 45 percent slopes	Bearisland	35
	Kadachan	30
	Rubble land	25
	Seclusion	10

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20MT2: Escures-Polkapenn-Nunatak complex, 45 to 95 percent slopes	Escures	25
	Polkapenn	25
	Nunatak	20
	Bearisland	10
	Kadachan	10
	Rock outcrop	5
	Rubble land	5
20MT3: Polkapenn-Bearisland-Enigma complex, 40 to 100 percent slopes	Polkapenn	30
	Bearisland	25
	Enigma	20
	Rock outcrop	10
	Seclusion	10
	Rubble land	5
20MT4: Seclusion-Rock outcrop complex, 45 to 100 percent slopes	Seclusion	65
	Rock outcrop	25
	Skarn	10
20MT5: Rock outcrop-Seclusion-Skarn complex, 30 to 90 percent slopes	Rock outcrop	35
	Seclusion	25
	Skarn	20
	Kadachan	10
	Muirpoint	10
20MT6: Bergbay-Boussole-Toyatte complex, 25 to 90 percent slopes	Bergbay	30
	Boussole	25
	Toyatte	20
	Fingers	10
	Kashoto	10
	Abdallah	5

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20MT7: Foad-Abdallah-Justicecreek complex, 35 to 85 percent slopes	Foad	35
	Abdallah	25
	Justicecreek	20
	Kutskloh	10
	Rubble land	10
20MTC: Skarn-Polkapenn-Kadachan complex, 25 to 90 percent slopes	Skarn	35
	Polkapenn	25
	Kadachan	20
	Enigma	10
	Rock outcrop	10
20MTE: Wachusett-Maquinna-Boussole complex, 10 to 60 percent slopes	Wachusett	40
	Maquinna	30
	Boussole	20
	Fingers	10
20MTF: Wachusett-Maquinna-Enigma complex, 25 to 90 percent slopes	Wachusett	35
	Maquinna	25
	Enigma	20
	Escures	10
	Fingers	10
20OC1: Scidmore-Perouse, frequently ponded complex, 0 to 3 percent slopes	Scidmore	55
	Perouse, frequently ponded	35
	Scidmore, drained	10
20OD1: Gustavus-Lamplugh complex, 0 to 30 percent slopes	Gustavus	45
	Lamplugh	45
	Perouse, frequently ponded	10

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20ODF: Glacierbay-Geikie complex, 0 to 15 percent slopes	Glacierbay	50
	Geikie	30
	Excursion	10
	Topsy	10
20OP1: Fossil-Tyeen-Vivid complex, 0 to 15 percent slopes	Fossil	30
	Tyeen	25
	Vivid	20
	Fingers	10
	Riverwash	10
	Lituya	5
20OP4: Kashoto-Annoksek-Bulky complex, 0 to 10 percent slopes	Kashoto	50
	Annoksek	30
	Bulky	15
	Murkbay	5
20OP5: Fossil-Tyeen-Vivid complex, 15 to 45 percent slopes	Fossil	35
	Tyeen	25
	Vivid	20
	Puffin	10
	Riverwash	10
20OP6: Bulky-Bertha-Icy complex, 0 to 10 percent slopes	Bulky	35
	Bertha	30
	Icy	15
	Puffin	10
	Riverwash	10
20OPE: Tyeen-Shagcove-Puffin complex, 0 to 15 percent slopes	Tyeen	40
	Shagcove	30
	Puffin	20
	Riverwash	10

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20OV1: Perouse, frequently ponded-Perouse complex, 0 to 5 percent slopes	Perouse, frequently ponded	60
	Perouse	40
20OW1: Perouse-Gustavus-Perouse, frequently ponded complex, 0 to 5 percent slopes	Perouse	40
	Gustavus	30
	Perouse, frequently ponded	20
	Scidmore, drained	10
20OWF: Fairweather-Icy complex, 0 to 5 percent slopes	Fairweather	70
	Icy	30
20PL1: Tyeen-Cenotaph-Fossil complex, 0 to 30 percent slopes	Tyeen	40
	Cenotaph	25
	Fossil	20
	Lituya	10
	Water, nonsaline	5
20PL2: Tyeen-Fossil-Fingers complex, 0 to 30 percent slopes	Tyeen	35
	Fossil	30
	Fingers	15
	Vivid	10
	Water, nonsaline	10
20PL3: Kashoto-Annoksek-Ancon complex, 0 to 25 percent slopes	Kashoto	35
	Annoksek	25
	Ancon	20
	Fingers	10
	Water, nonsaline	10
20PL6: Tidalwave-Drybay-Puffin complex, 0 to 10 percent slopes	Tidalwave	60
	Drybay	25
	Puffin	15

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20PLD:		
Typic Cryaquents-Typic Cryorthents association, flat lowlands, 0 to 5 percent slopes	Typic Cryaquents, sandy	55
	Typic Cryorthents, sandy, rarely flooded	30
	Oxyaquic Cryopsamments	10
	Typic Cryopsamments	5
20RW2:		
Riverwash-Oxyaquic Cryorthents complex, 0 to 5 percent slopes	Riverwash	60
	Oxyaquic Cryorthents, sandy or gravelly	25
	Water	10
	Typic Cryaquents, gravelly, frequently flooded	5
20SC:		
Beaches-Typic Cryopsamments complex, 0 to 5 percent slopes	Beaches	60
	Typic Cryopsamments, rarely flooded	30
	Water, saline	10
20TE2:		
Tidalwave-Drybay complex, 0 to 5 percent slopes	Tidalwave	50
	Drybay	30
	Ashmun, frequently ponded	10
	Puffin	10
20TF1:		
Water, saline-Astrolable-Murkbay complex, 0 to 5 percent slopes	Water, saline	70
	Astrolable	15
	Murkbay	15

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20TF3:		
Water, saline-Astrolable-Beartrack complex, 0 to 3 percent slopes	Water, saline	55
	Astrolable	20
	Beartrack	15
	Lituya	10
20TH1:		
Ibach-Lamplugh-Bartlettcove complex, 2 to 35 percent slopes------	Ibach	40
	Lamplugh	30
	Bartlettcove	20
	Gustavus	10
20UL1:		
Urban land--	Urban land	90
	Scidmore, drained	10
20UM1:		
Rock outcrop-Bearisland complex, 60 to 100 percent slopes--------	Rock outcrop	60
	Bearisland	25
	Skarn	10
	Seclusion	5
20UM2:		
Rock outcrop-Bearisland complex, 10 to 60 percent slopes---------	Rock outcrop	60
	Bearisland	25
	Skarn	10
	Seclusion	5
20VBA:		
Typic Cryofluvents-Aquic Dystrocryepts association, flood plains, 0 to 5 percent slopes--	Typic Cryofluvents	50
	Aquic Dystrocryepts, silty	30
	Typic Cryaquents, gravelly	10
	Typic Haplocryods, sandy	10

Table 1.—Legend—Continued

Map unit symbol and map unit name	Components in map unit	Percent of map unit
20WD1: Perouse-Scidmore-Perouse, frequently ponded complex, 0 to 5 percent slopes	Perouse	35
	Scidmore	35
	Perouse, frequently ponded	20
	Gustavus	10
22HIA: Rock outcrop and Lithic Cryorthents	Rock outcrop, rugged summit	80
	Lithic Cryorthents, rugged summit	15
	Lithic Cryosaprists, rugged summit	5
22SM1: Woodlake-Flapjack complex, 5 to 40 percent slopes	Woodlake	60
	Flapjack	30
	Rock outcrop	10
BR: Rock outcrop	Rock outcrop	100
GL2: Glaciers	Glaciers	95
	Rock outcrop	5
P: Pits	Pits	90
	Water, nonsaline	10
RW: Riverwash	Riverwash	90
	Water, nonsaline	10
SW: Water, saline	Water, saline	95
	Rock outcrop	5
W: Water	Water	100

Table 2.—Acres, Hectares, and Proportionate Extent of the Map Units

Map symbol	Map unit name	Acres	Hectares	Percent
20AF1	Muirpoint-Puffin complex, 5 to 20 percent slopes	8,612	3,485	0.3
20AF2	Entisols, alluvial fans, 0 to 35 percent slopes	1	0	*
20CL1	Strawberry-Fingerock complex, 0 to 5 percent slopes	500	202	*
20CP1	Oberlin-Perouse, frequently ponded-Perouse complex, 0 to 2 percent slopes	1,380	558	*
20CP2	Beaches-Monashka-Murkbay complex, 0 to 3 percent slopes	2,185	884	*
20CPF	Icy-Excursion complex, 0 to 1 percent slopes	1,950	789	*
20ED1	Gustavus-Bartlettcove complex, 5 to 20 percent slopes	400	162	*
20ED2	Beardslee-Monashka complex, 0 to 15 percent slopes	8,010	3,242	0.2
20FP1	Drybay-Tidalwave complex, 0 to 8 percent slopes	21,548	8,720	0.6
20FP2	Bertha-Puffin complex, 0 to 15 percent slopes	3,126	1,265	*
20FP3	Tidalwave-Ashmun, frequently ponded-Drybay complex, 0 to 10 percent slopes	15,227	6,162	0.5
20FPL	Cryaquepts-Typic Cryaquents-Water complex, estuaries, 0 to 5 percent slopes	2,506	1,014	*
20FPM	Typic Cryaquents, flood plains, 0 to 5 percent slopes	204	83	*
20FPY	Oxyaquic Cryorthents-Typic Cryaquents association, flood plains, 0 to 5 percent slopes	16,046	6,494	0.5
20FPZ	Typic Cryorthents-Typic Cryofluvents association, flood plains, 0 to 5 percent slope	132	53	*
20GP1	Gustavus-Ibach-Scidmore complex, 0 to 30 percent slopes	2,789	1,129	*
20HI1	Foad-Boussole complex, 25 to 65 percent slopes	3,538	1,432	0.1
20HI2	Kashoto-Foad-Kutskloh complex, 2 to 55 percent slopes	12,694	5,137	0.4
20HI3	Polkapenn-Dagelet-Nunatak complex, 20 to 65 percent slopes	19,693	7,970	0.6
20HI5	Kaknau-Tricklake complex, 20 to 65 percent slopes	4,996	2,022	0.2
20HIB	Drybay-Kaknau-Vivid complex, 5 to 35 percent slopes	42,605	17,242	1.3
20HID	Grandplateau-Crillon complex, 10 to 60 percent slopes	9,383	3,797	0.3
20HIE	Kashoto-Kutskloh-Wachusett complex, 5 to 55 percent slopes	16,847	6,818	0.5
20HIF	Kashoto-Wachusett complex, 2 to 25 percent slopes	11,251	4,553	0.3
20HIN	Polkapenn-Nunatak complex, 20 to 60 percent slopes	17,852	7,224	0.5
20HIS	Lithic Cryorthents and Typic Humicryepts, 76 to 140 percent slopes	205,867	83,312	6.2
20IS1	Cenotaph-Water, saline-Beaches complex, 0 to 5 percent slopes	14,861	6,014	0.4
20LF1	Abyss-Astrolable complex, 0 to 5 percent slopes	479	194	*
20MD1	Gustavus-Perouse complex, 0 to 15 percent slopes	915	370	*
20MF1	Geikie-Gustavus-Scidmore complex, 0 to 8 percent slopes	848	343	*
20MF2	Gustavus-Geikie complex, 0 to 10 percent slopes	10,965	4,437	0.3
20MT1	Bearisland-Kadachan-Rubble land complex, 15 to 45 percent slopes	40,790	16,507	1.2
20MT2	Escures-Polkapenn-Nunatak complex, 45 to 95 percent slopes	46,821	18,948	1.4
20MT3	Polkapenn-Bearisland-Enigma complex, 40 to 100 percent slopes	10,961	4,436	0.3
20MT4	Seclusion-Rock outcrop complex, 45 to 100 percent slopes	49,902	20,195	1.5
20MT5	Rock outcrop-Seclusion-Skarn complex, 30 to 90 percent slopes	86,793	35,124	2.6
20MT6	Bergbay-Boussole-Toyatte complex, 25 to 90 percent slopes	50,089	20,270	1.5
20MT7	Foad-Abdallah-Justicecreek complex, 35 to 85 percent slopes	21,030	8,511	0.6
20MTC	Skarn-Polkapenn-Kadachan complex, 25 to 90 percent slopes	13,006	5,263	0.4
20MTE	Wachusett-Maquinna-Boussole complex, 10 to 60 percent slopes	13,385	5,417	0.4
20MTF	Wachusett-Maquinna-Enigma complex, 25 to 90 percent slopes	8,852	3,582	0.3
20OC1	Scidmore-Perouse, frequently ponded complex, 0 to 3 percent slopes	2,267	917	*
20OD1	Gustavus-Lamplugh complex, 0 to 30 percent slopes	1,334	540	*
20ODF	Glacierbay-Geikie complex, 0 to 15 percent slopes	1,368	554	*
20OP1	Fossil-Tyeen-Vivid complex, 0 to 15 percent slopes	35,626	14,417	1.1
20OP4	Kashoto-Annoksek-Bulky complex, 0 to 10 percent slopes	56,411	22,829	1.7
20OP5	Fossil-Tyeen-Vivid complex, 15 to 45 percent slopes	29,355	11,880	0.9
20OP6	Bulky-Bertha-Icy complex, 0 to 10 percent slopes	42,385	17,153	1.3
20OPE	Tyeen-Shagcove-Puffin complex, 0 to 15 percent slopes	4,815	1,949	0.1
20OV1	Perouse, frequently ponded-Perouse complex, 0 to 5 percent slopes	739	299	*

See footnote at end of table.

Table 2.—Acres, Hectares, and Proportionate Extent of the Map Units—Continued

Map symbol	Map unit name	Acres	Hectares	Percent
20OW1	Perouse-Gustavus-Perouse, frequently ponded complex, 0 to 5 percent slopes	5,592	2,263	0.2
20OWF	Fairweather-Icy complex, 0 to 5 percent slopes	284	115	*
20PL1	Tyeen-Cenotaph-Fossil complex, 0 to 30 percent slopes	20,670	8,365	0.6
20PL2	Tyeen-Fossil-Fingers complex, 0 to 30 percent slopes	30,438	12,318	0.9
20PL3	Kashoto-Annoksek-Ancon complex, 0 to 25 percent slopes	5,861	2,372	0.2
20PL6	Tidalwave-Drybay-Puffin complex, 0 to 10 percent slopes	1,544	625	*
20PLD	Typic Cryaquents-Typic Cryorthents association, flat lowlands, 0 to 5 percent slopes	1,895	767	*
20RW2	Riverwash-Oxyaquic Cryorthents complex, 0 to 5 percent slopes	5,192	2,101	0.2
20SC	Beaches-Typic Cryopsamments complex, 0 to 5 percent slopes	4,058	1,642	0.1
20TE2	Tidalwave-Drybay complex, 0 to 5 percent slopes	5,022	2,032	0.2
20TF1	Water, saline-Astrolable-Murkbay complex, 0 to 5 percent slopes	6,335	2,564	0.2
20TF3	Water, saline-Astrolable-Beartrack complex, 0 to 3 percent slopes	6,540	2,647	0.2
20TH1	Ibach-Lamplugh-Bartlettcove complex, 2 to 35 percent slopes	3,239	1,311	*
20UL1	Urban land	153	62	*
20UM1	Rock outcrop-Bearisland complex, 60 to 100 percent slopes	7,588	3,071	0.2
20UM2	Rock outcrop-Bearisland complex, 10 to 60 percent slopes	14,519	5,876	0.4
20VBA	Typic Cryofluvents-Aquic Dystrocryepts association, flood plains, 0 to 5 percent slopes	18,176	7,356	0.5
20WD1	Perouse-Scidmore-Perouse, frequently ponded complex, 0 to 5 percent slopes	1,501	607	*
22HIA	Rock outcrop and Lithic Cryorthents	208,435	84,351	6.3
22SM1	Woodlake-Flapjack complex, 5 to 40 percent slopes	470	190	*
BR	Rock outcrop	7,683	3,109	0.2
GL2	Glaciers	1,323,590	535,640	39.9
P	Pits	41	17	*
RW	Riverwash	20,623	8,346	0.6
SW	Water, saline	581,716	235,413	17.5
W	Water	61,077	24,717	1.8
	Total	3,315,581	1,341,774	100.0

* Less than 0.1 percent.

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID

(Miscellaneous nonsoil components are not displayed in this report. Component percents may not add up to 100. MAP is mean annual precipitation)

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20AF1:								
Muirpoint	65	5-20	0-60	1500-1900	Valley train	Well drained	Glaciofluvial deposits	Maritime Forest Sandy Plain Alluvial Fan, F220XY430AK
Puffin	15	5-15	0-50	1991-3231	Talf on low flood plain	Somewhat poorly drained	Alluvium	Maritime Shrub Gravelly Floodplain Low, R220XY426AK
20AF2:								
Entisols, alluvial fans, occasionally flooded	90	0-35	0-300	3556-5588	Alluvial fan	Moderately well drained	Alluvium over outwash	Maritime Shrub Gravelly Drainageway, R220XY425AK
20CL1:								
Strawberry	60	0-5	0-10	850-1815	Talf on beach plain	Somewhat poorly drained	Marine deposits	Estuarine Herbaceous Sandy Beach Plain, R220XY424AK
Fingerock	20	0-1	1-20	850-1815	Raised beach	Moderately well drained	Beach sand	Estuarine Herbacous Sandy Coastal Plain, R220XY422AK
20CP1:								
Oberlin	55	0-2	0-20	850-1815	Tread on marine terrace	Poorly drained	Outwash over marine deposits	Estuarine Herbaceous Sandy Depression, R220XY423AK
Perouse, frequently ponded	25	0-2	1-20	850-1815	Outwash delta	Very poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
Perouse	15	0-2	1-20	850-1815	Outwash delta	Poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20CP2:								
Monashka-----------	25	0-3	0-3	2180-6360	Dip on dune slack on coastal plain	Very poorly drained	Sandy eolian sands	Estuarine Herbaceous Sandy Depression, R220XY423AK
Murkbay------------	25	0-3	1-15	2180-6360	Barrier beach	Well drained	Fluviomarine deposits	Estuarine Herbacous Sandy Coastal Plain, R220XY422AK
20CPF:								
Icy----------------	45	0-1	0-20	850-1815	Tread on fluviomarine terrace	Very poorly drained	Alluvium	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK
Excursion----------	40	0-1	0-20	850-1815	Outwash delta	Very poorly drained	Mossy organic material over outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
20ED1:								
Gustavus-----------	75	5-20	2-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Bartlettcove-------	20	5-20	18-50	850-1815	Side slope and backslope on eolian hill	Well drained	Eolian sands	Maritime Forest Gravelly Plain, F220XY432AK
20ED2:								
Beardslee----------	60	3-15	0-30	2184-6356	Side slope on eolian dune	Well drained	Eolian sands	Maritime Forest Sandy Plains Eolian, F220XY466AK
Monashka-----------	40	0-3	0-30	2180-6360	Dip on dune slack on coastal plain	Very poorly drained	Sandy eolian sands	Estuarine Herbaceous Sandy Depression, R220XY423AK
20FP1:								
Drybay-------------	70	0-8	0-200	2184-6356	Tread on stream terrace	Well drained	Silty eolian deposits over sandy and gravelly alluvium	Maritime Forest Gravelly Alluvial Plain, F220XY460AK
Tidalwave----------	30	0-3	0-50	2184-6356	Tread on terrace	Moderately well drained	Loess over alluvium	Maritime Forest Gravelly Alluvial Plain, F220XY460AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20FP2:								
Bertha	55	0-15	0-50	850-1815	Rise on high flood plain	Well drained	Sandy alluvium	Maritime Forest Gravelly Floodplain High, F220XY427AK
Puffin	30	0-5	0-50	1991-3231	Talf on low flood plain	Somewhat poorly drained	Alluvium	Maritime Shrub Gravelly Floodplain Low, R220XY426AK
20FP3:								
Tidalwave	60	0-5	0-50	2184-6356	Tread on terrace	Moderately well drained	Loess over alluvium	Maritime Forest Gravelly Alluvial Plain, F220XY460AK
Ashmun, frequently ponded	25	0-2	0-200	2184-6356	Depression on alluvial flat	Very poorly drained	Outwash	Maritime Shrub Sandy Drainageways, R220XY461AK
Drybay	15	0-10	0-200	2184-6356	Tread on stream terrace	Well drained	Silty eolian deposits over sandy and gravelly alluvium	Maritime Forest Gravelly Alluvial Plain, F220XY460AK
20FPL:								
Cryaquepts	40	0-5	0-75	3556-4318	Depression on shore complex	Poorly drained	Alluvium	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK
Typic Cryaquents, gravelly, very poorly drained	30	0-5	0-75	3556-4318	Dip on flood plain and on shore complex	Very poorly drained	Alluvium, marine deposits, and/or glacial outwash	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK
20FPM:								
Typic Cryaquents, silty	85	0-5	0-30	3556-4318	Dip on flood plain on alluvial plain and outwash plain	Poorly drained	Alluvium, marine deposits, and/or glacial outwash	Maritime Shrub Gravelly Floodplain Low, R220XY426AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20FPY:								
Oxyaquic Cryorthents, sandy or gravelly	60	0-5	0-61	3556-4318	Talf on flood plain on alluvial plain	Moderately well drained	Alluvium and/or glacial outwash	Maritime Forest Gravelly Floodplain High, F220XY427AK
Typic Cryaquents, sandy or gravelly	25	0-5	0-61	3556-4318	Dip on flood plain on alluvial plain	Poorly drained	Alluvium, glaciomarine deposits, and/or glacial outwash	Maritime Shrub Gravelly Floodplain Low, R220XY426AK
20FPZ:								
Typic Cryorthents, gravelly	60	0-5	0-91	3556-4318	Talf and rise on flood plain on alluvial plain	Well drained	Glacial outwash	Maritime Forest Gravelly Floodplain High, F220XY427AK
Typic Cryofluvents	30	0-5	0-30	3556-4318	Dip and talf on flood plain on alluvial plain	Well drained	Alluvium and/or glacial outwash	Maritime Forest Gravelly Floodplain High, F220XY427AK
20GP1:								
Gustavus	35	15-30	2-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Ibach	35	15-30	2-45	850-1815	Moraine	Well drained	Till	Maritime Forest Loamy Slopes, F220XY433AK
Scidmore	25	0-5	2-40	850-1815	Talf on pitted outwash plain	Moderately well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
20HI1:								
Foad	65	25-65	20-220	1780-3312	Side slope and backslope on glaciated hill	Well drained	Colluvium over residuum	Maritime Forest Gravelly Slopes, F220XY441AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20HI1:								
Boussole	20	25-60	20-250	1780-3312	Center third of mountain-flank on mountain valley	Somewhat poorly drained	Organic material over colluvium over residuum	Maritime Forest Loamy Slopes Steep, F220XY442AK
20HI2:								
Kashoto	35	2-8	12-34	1780-3312	Dip on muskeg on glaciated plain	Poorly drained	Mossy organic material	Maritime Woodland Peat Plain Depression, F220XY434AK
Foad	25	10-55	20-220	1780-3312	Side slope and backslope on glaciated hill	Well drained	Colluvium over residuum	Maritime Forest Gravelly Slopes, F220XY441AK
Kutskloh	20	15-40	0-250	1780-3312	Center third of mountain-flank on mountain slope	Poorly drained	Organic material over colluvium	Maritime Forest Loamy Organic Slopes, F220XY447AK
20HI3:								
Polkapenn	35	25-60	20-275	850-1815	Side slope and backslope on hillslope	Well drained	Till over residuum	Maritime Forest Loamy Plains, F220XY440AK
Dagelet	25	20-55	0-250	850-1815	Center third of mountain-flank on mountain slope	Well drained	Colluvium over residuum	Maritime Forest Loamy Slopes, F220XY433AK
Nunatak	20	25-65	20-275	850-1815	Center third of mountain-flank on mountain slope	Well drained	Colluvium over residuum	Maritime Forest Loamy Slopes, F220XY433AK
20HI5:								
Kaknau	45	20-60	30-200	850-1815	Side slope and backslope on glacially modified hillslope	Well drained	Colluvium over residuum	Maritime Forest Loamy Slopes Warm, F220XY468AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20HI5:								
Tricklake	35	20-65	30-200	2184-6356	Side slope and shoulder on hillslope	Well drained	Noncalcareous loess	Maritime Forest Gravelly Slopes, F220XY441AK
20HIB:								
Drybay	35	5-10	0-200	2184-6356	Tread on stream terrace	Well drained	Silty eolian deposits over sandy and gravelly alluvium	Maritime Forest Gravelly Alluvial Plain, F220XY460AK
Kaknau	30	10-35	30-200	850-1815	Side slope and backslope on glacially modified hillslope	Well drained	Colluvium over residuum	Maritime Forest Loamy Slopes Warm, F220XY468AK
Vivid	25	5-8	10-70	850-1815	Dip on glacial-valley floor	Very poorly drained	Lacustrine deposits over till	Maritime Graminoid Loamy Plain Depression, R220XY436AK
20HID:								
Grandplateau	55	35-60	35-200	2184-6356	Side slope and backslope on glacially modified hillslope	Poorly drained	Volcanic ash over colluvium over residuum	Maritime Forest Loamy Slopes Cold, F220XY464AK
Crillon	35	10-45	35-200	2184-6356	Side slope and backslope on drumlinoid ridge	Moderately well drained	Colluvium over residuum	Maritime Scrub Loamy Slopes, R220XY465AK
20HIE:								
Kashoto	40	5-15	12-34	1780-3312	Dip on muskeg on glaciated plain	Poorly drained	Mossy organic material	Maritime Woodland Peat Plain Depression, F220XY434AK
Kutskloh	30	5-40	0-250	1780-3312	Center third of mountain-flank on mountain slope	Poorly drained	Organic material over colluvium	Maritime Forest Loamy Organic Slopes, F220XY447AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20HIE:								
Wachusett----------	20	20-55	30-250	1991-3231	Side slope and backslope on hillslope	Moderately well drained	Organic material over till over residuum	Maritime Forest Loamy Slopes Steep, F220XY442AK
20HIF:								
Kashoto-----------	45	2-15	12-250	1780-3312	Dip on muskeg on glaciated plain	Poorly drained	Mossy organic material	Maritime Woodland Peat Plain Depression, F220XY434AK
Wachusett----------	35	5-25	30-250	1991-3231	Side slope and backslope on hillslope	Moderately well drained	Organic material over till over residuum	Maritime Forest Loamy Slopes Steep, F220XY442AK
20HIN:								
Polkapenn----------	40	20-60	20-275	850-1815	Side slope and backslope on hillslope	Well drained	Till over residuum	Maritime Forest Loamy Plains, F220XY440AK
Nunatak------------	30	30-60	20-275	850-1815	Center third of mountain-flank on mountain slope	Well drained	Colluvium over residuum	Maritime Forest Loamy Slopes, F220XY433AK
20HIS:								
Lithic Cryorthents, rugged summit-----	46	76-140	350-1200	5207-6223	Mountaintop on mountain slope	Well drained	Colluvium and/or residuum	Alpine Dwarf Scrub Gravelly Slopes, Bedrock, R222XY356AK
Typic Humicryepts, high elevation----	44	76-140	350-750	5207-6223	Mountainflank on mountain slope	Moderately well drained	Colluvium	Maritime Scrub Loamy Slopes, R220XY465AK
20IS1:								
Cenotaph-----------	35	0-5	0-100	850-1815	Talf on glacial-valley floor	Poorly drained	Organic material over till	Maritime Forest Loamy Plain Wet, F220XY435AK
20LF1:								
Abyss--------------	55	0-5	0-6	850-1815	Talf on high flood plain	Somewhat poorly drained	Sandy alluvium	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20LF1:								
Astrolable	30	0-3	0-20	850-1815	Talf on tidal marsh	Very poorly drained	Marine deposits	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK
20MD1:								
Gustavus	70	5-15	2-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Perouse	20	0-2	1-20	850-1815	Outwash delta	Poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
20MF1:								
Geikie	55	0-8	1-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Gustavus	30	0-8	2-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Scidmore	15	0-2	2-40	850-1815	Talf on pitted outwash plain	Moderately well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
20MF2:								
Gustavus	60	5-10	2-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Geikie	30	0-5	1-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
20MT1:								
Bearisland	35	15-40	20-350	850-1815	Lower third and center third of mountainflank on moraine on mountain valley	Well drained	Outwash	Maritime Forest Loamy Slopes, F220XY433AK
Kadachan	30	15-45	20-250	850-1815	Mountainflank on drainageway on mountain slope	Moderately well drained	Alluvium	Maritime Scrub Gravelly Drainageways Steep, R220XY444AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20MT2:								
Escures	25	60-80	20-350	1991-3231	Mountainflank on escarpment	Well drained	Colluvium over residuum	Maritime Scrub Loamy Escarpments, R220XY446AK
Polkapenn	25	55-95	20-275	850-1815	Side slope and backslope on hillslope	Well drained	Till over residuum	Maritime Forest Loamy Plains, F220XY440AK
Nunatak	20	45-70	20-275	850-1815	Center third of mountain-flank on mountain slope	Well drained	Colluvium over residuum	Maritime Forest Loamy Slopes, F220XY433AK
20MT3:								
Polkapenn	30	45-95	20-275	850-1815	Side slope and backslope on hillslope	Well drained	Till over residuum	Maritime Forest Loamy Plains, F220XY440AK
Bearisland	25	40-75	20-350	850-1815	Lower third and center third of mountainflank on moraine on mountain valley	Well drained	Outwash	Maritime Forest Loamy Slopes, F220XY433AK
Enigma	20	50-100	20-300	850-1815	Center third of mountain-flank on avalanche chute on mountain slope	Well drained	Colluvium over residuum	Maritime Scrub Loamy Slopes Steep, R220XY443AK
20MT4:								
Seclusion	65	45-100	20-150	850-1815	Lower third of mountainflank on escarpment	Well drained	Colluvium over residuum	Maritime Scrub Loamy Escarpments, R220XY446AK
20MT5:								
Seclusion	25	50-90	20-150	850-1815	Lower third of mountainflank on escarpment	Well drained	Colluvium over residuum	Maritime Scrub Loamy Escarpments, R220XY446AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20MT5:								
Skarn	20	30-60	30-350	850-1815	Lower third of mountainflank on mountain slope	Well drained	Colluvium over residuum	Maritime Forest Loamy Slopes, F220XY433AK
20MT6:								
Bergbay	30	40-90	20-200	1780-3312	Lower third of mountainflank on mountain slope	Well drained	Colluvium over residuum weathered from granite	Maritime Forest Gravelly Slopes, F220XY441AK
Boussole	25	30-60	20-250	1780-3312	Center third of mountain-flank on mountain valley	Somewhat poorly drained	Organic material over colluvium over residuum	Maritime Forest Loamy Slopes Steep, F220XY442AK
Toyatte	20	25-50	20-200	1778-3860	Lower third of mountainflank on muskeg on mountain slope	Somewhat poorly drained	Organic material over till over residuum	Maritime Woodland Peat Slopes, F220XY439AK
20MT7:								
Foad	35	45-85	20-220	1780-3312	Side slope and backslope on glaciated hill	Well drained	Colluvium over residuum	Maritime Forest Gravelly Slopes, F220XY441AK
Abdallah	25	40-65	42-250	1780-3312	Center third of mountain-flank on avalanche chute on r mountain slope	Well drained	Gravelly colluvium	Maritime Scrub Loamy Slopes Steep, R220XY443AK
Justicecreek	20	35-75	90-105	1780-3312	Mountainflank on mountain slope	Well drained	Organic material over residuum	Maritime Forest Loamy Plains, F220XY440AK
20MTC:								
Skarn	35	30-60	30-350	850-1815	Lower third of mountainflank on mountain slope	Well drained	Colluvium over residuum	Maritime Forest Loamy Slopes, F220XY433AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20MTC:								
Polkapenn	25	35-90	20-275	850-1815	Side slope and backslope on hillslope	Well drained	Till over residuum	Maritime Forest Loamy Plains, F220XY440AK
Kadachan	20	25-50	20-250	850-1815	Mountainflank in drainageway on mountain slope	Moderately well drained	Alluvium	Maritime Scrub Gravelly Drainageways Steep, R220XY444AK
20MTE:								
Wachusett	40	20-60	30-250	1991-3231	Mountainflank on mountain slope	Moderately well drained	Organic material over till over residuum	Maritime Forest Loamy Slopes Steep, F220XY442AK
Maquinna	30	15-50	30-250	1991-3231	Lower third of mountainflank on mountain slope	Well drained	Organic material over colluvium over residuum	Maritime Forest Gravelly Slopes, F220XY441AK
Boussole	20	10-40	20-250	1780-3312	Center third of mountainflank on mountain valley	Somewhat poorly drained	Organic material over colluvium over residuum	Maritime Forest Loamy Slopes Steep, F220XY442AK
20MTF:								
Wachusett	35	30-80	30-250	1991-3231	Mountainflank on mountain slope	Moderately well drained	Organic material over till over residuum	Maritime Forest Loamy Slopes Steep, F220XY442AK
Maquinna	25	25-70	30-250	1991-3231	Lower third of mountainflank on mountain slope	Well drained	Organic material over colluvium over residuum	Maritime Forest Gravelly Slopes, F220XY441AK
Enigma	20	40-90	20-300	850-1815	Center third of mountainflank on avalanche chute on mountain slope	Well drained	Colluvium over residuum	Maritime Scrub Loamy Slopes Steep, R220XY443AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20OC1:								
Scidmore	55	0-3	2-40	850-1815	Talf on pitted outwash plain	Moderately well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Perouse, frequently ponded	35	0-1	1-20	850-1815	Outwash delta	Very poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
20OD1:								
Gustavus	45	5-30	2-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Lamplugh	45	0-10	0-20	850-1815	Outwash delta	Poorly drained	Organic material over outwash	Maritime Forest Loamy Plain Wet, F220XY435AK
20ODF:								
Glacierbay	50	0-5	1-20	850-1815	Outwash delta	Very poorly drained	Glaciolacustrine deposits	Maritime Forest Sandy Coastal Plain, F220XY455AK
Geikie	30	0-15	1-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
20OP1:								
Fossil	30	0-15	8-70	850-1815	Talf on pitted outwash plain	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Tyeen	25	0-15	0-100	850-1815	Rise on glacial-valley floor	Well drained	Gravelly till	Maritime Forest Gravelly Plain, F220XY432AK
Vivid	20	0-3	10-70	850-1815	Dip on glacial-valley floor	Very poorly drained	Lacustrine deposits over till	Maritime Graminoid Loamy Plain Depression, R220XY436AK
20OP4:								
Kashoto	50	0-3	12-34	1780-3312	Dip on muskeg on glaciated plain	Poorly drained	Mossy organic material	Maritime Woodland Peat Plain Depression, F220XY434AK
Annoksek	30	0-10	0-70	1780-3312	Talf on till plain	Well drained	Residuum weathered from graywacke	Maritime Forest Loamy Plains, F220XY440AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20OP4:								
Bulky	15	0-5	0-200	1780-3312	Outwash delta	Very poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
20OP5:								
Fossil	35	15-25	8-70	850-1815	Talf on pitted outwash plain	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Tyeen	25	15-45	0-100	850-1815	Rise on glacial-valley floor	Well drained	Gravelly till	Maritime Forest Gravelly Plain, F220XY432AK
Vivid	20	15-20	10-70	850-1815	Dip on glacial-valley floor	Very poorly drained	Lacustrine deposits over till	Maritime Graminoid Loamy Plain Depression, R220XY436AK
20OP6:								
Bulky	35	0-5	0-200	1780-3312	Outwash delta	Very poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
Bertha	30	2-10	0-50	850-1815	Rise on high flood plain	Well drained	Sandy alluvium	Maritime Forest Gravelly Floodplain High, F220XY427AK
Icy	15	0-5	0-20	850-1815	Tread on fluviomarine terrace	Very poorly drained	Alluvium	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK
20OPE:								
Tyeen	40	5-15	0-100	850-1815	Rise on glacial-valley floor	Well drained	Gravelly till	Maritime Forest Gravelly Plain, F220XY432AK
Shagcove	30	1-2	0-70	850-1815	Depression on valley train	Somewhat poorly drained	Outwash	Maritime Forest Loamy Plain Wet, F220XY435AK
Puffin	20	0-10	0-50	1991-3231	Talf on low flood plain	Somewhat poorly drained	Alluvium	Maritime Shrub Gravelly Floodplain Low, R220XY426AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20OV1:								
Perouse, frequently ponded------------	60	0-2	1-20	850-1815	Outwash delta	Very poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
Perouse------------	40	0-5	1-20	850-1815	Outwash delta	Poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
Perouse------------	40	0-5	1-20	850-1815	Outwash delta	Poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
20OW1:								
Gustavus-----------	30	2-5	2-45	850-1815	Outwash delta	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Perouse, frequently ponded------------	20	0-2	1-20	850-1815	Outwash delta	Very poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
20OWF:								
Fairweather--------	70	0-5	0-5	850-1815	Dip on pitted outwash plain	Very poorly drained	Glaciolacustrine deposits over outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
Icy----------------	30	0-3	0-20	850-1815	Tread on fluviomarine terrace	Very poorly drained	Alluvium	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK
20PL1:								
Tyeen--------------	40	5-30	0-100	850-1815	Rise on glacial-valley floor	Well drained	Gravelly till	Maritime Forest Gravelly Plain, F220XY432AK
Cenotaph-----------	25	0-5	0-100	850-1815	Talf on glacial-valley floor	Poorly drained	Organic material over till	Maritime Forest Loamy Plain Wet, F220XY435AK
Fossil-------------	20	2-15	8-70	850-1815	Talf on pitted outwash plain	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20PL2:								
Tyeen	35	5-30	0-100	850-1815	Rise on glacial-valley floor	Well drained	Gravelly till	Maritime Forest Gravelly Plain, F220XY432AK
Fossil	30	2-15	8-70	850-1815	Talf on pitted outwash plain	Well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Fingers	15	0-8	10-130	850-1815	Dip on drainageway on glaciated plain	Somewhat poorly drained	Alluvium	Maritime Shrub Gravelly Drainageway, R220XY425AK
20PL3:								
Kashoto	35	0-10	12-34	1780-3312	Dip on muskeg on glaciated plain	Poorly drained	Mossy organic material	Maritime Woodland Peat Plain Depression, F220XY434AK
Annoksek	25	3-15	0-70	1780-3312	Talf on till plain	Well drained	Residuum weathered from graywacke	Maritime Forest Loamy Plains, F220XY440AK
Ancon	20	0-25	10-130	1780-3312	Talf on glaciated plain	Moderately well drained	Till over residuum weathered from igneous, metamorphic and sedimentary rock	Maritime Forest Gravelly Plain, F220XY432AK
20PL6:								
Tidalwave	60	0-8	0-50	2184-6356	Tread on terrace	Moderately well drained	Loess over alluvium	Maritime Forest Gravelly Alluvial Plain, F220XY460AK
Drybay	25	0-10	0-200	2184-6356	Tread on stream terrace	Well drained	Silty eolian deposits over sandy and gravelly alluvium	Maritime Forest Gravelly Alluvial Plain, F220XY460AK
Puffin	15	0-2	0-50	1991-3231	Talf on low flood plain	Somewhat poorly drained	Alluvium	Maritime Shrub Gravelly Floodplain Low, R220XY426AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20PLD:								
Typic Cryaquents, sandy	55	0-5	0-30	3556-4318	Dip on depression on outwash plain and dip on dune slack on beach plain	Very poorly drained	Marine deposits and/or glacial outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
Typic Cryorthents, sandy, rarely flooded	30	0-5	0-30	3556-4318	Talf on beach ridge, interfluve shoulder on dune and rise on outwash plain	Well drained	Beach sand and/or glacial outwash	Maritime Forest Sandy Plains Eolian, F220XY466AK
20RW2:								
Oxyaquic Cryorthents, sandy or gravelly	25	0-5	0-61	3556-4318	Talf and rise on flood on alluvial plain	Moderately well drained	Alluvium and/or glacial outwash	Maritime Forest Gravelly Floodplain High, F220XY427AK
20SC:								
Typic Cryopsamments, rarely flooded	30	0-5	3-15	3556-4318	Rise on beach ridge	Well drained	Beach sand	Maritime Forest Gravelly Floodplain High, F220XY427AK
20TE2:								
Tidalwave	50	0-3	0-50	2184-6356	Tread on terrace	Moderately well drained	Loess over alluvium	Maritime Forest Gravelly Alluvial Plain, F220XY460AK
Drybay	30	0-5	0-200	2184-6356	Tread on stream terrace	Well drained	Silty eolian deposits over sandy and gravelly alluvium	Maritime Forest Gravelly Alluvial Plain, F220XY460AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20TF1:								
Astrolable	15	0-3	0-20	850-1815	Talf on tidal marsh	Very poorly drained	Marine deposits	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK
Murkbay	15	0-5	0-15	850-1815	Barrier beach	Well drained	Fluviomarine deposits	Estuarine Herbacous Sandy Coastal Plain, R220XY422AK
20TF3:								
Astrolable	20	0-0	0-6	850-1815	Talf on tidal marsh	Very poorly drained	Marine deposits	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK
Beartrack	15	0-3	1-20	850-1815	Talf on fluviomarine bottom	Poorly drained	Silty estuarine deposits	Estuarine Herbacous Gravelly Coastal Plain, R220XY329AK
20TH1:								
Ibach	40	2-35	2-45	850-1815	Moraine	Well drained	Till	Maritime Forest Loamy Slopes, F220XY433AK
Lamplugh	30	2-5	0-20	850-1815	Outwash delta	Poorly drained	Organic material over outwash	Maritime Forest Loamy Plain Wet, F220XY435AK
Bartlettcove	20	10-30	18-50	850-1815	Side slope and backslope on eolian hill	Well drained	Eolian sands	Maritime Forest Gravelly Plain, F220XY432AK
20UM1:								
Bearisland	25	60-85	120-350	850-1815	Lower third and center third of mountainflank on moraine on mountain valley	Well drained	Outwash	Maritime Forest Loamy Slopes, F220XY433AK
20UM2:								
Bearisland	25	10-55	110-350	850-1815	Lower third and center third of mountainflank on moraine on mountain valley	Well drained	Outwash	Maritime Forest Loamy Slopes, F220XY433AK

Table 3.—Climate, Landform Position, Drainage Class, Parent Material, and Ecosite ID—Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landform position	Drainage class	Parent material	Ecological site name and number
	Pct	Pct	m	mm				
20VBA:								
Typic Cryofluvents	50	0-5	0-30	3556-4318	Talf and dip on drainageway on alluvial flat	Well drained	Alluvium and/or glacial outwash	Maritime Forest Gravelly Floodplain High, F220XY427AK
Aquic Dystrocryepts, silty	30	0-5	0-30	3556-4318	Dip and rise on drainageway on alluvial flat	Somewhat poorly drained	Alluvium and/or glacial outwash	Maritime Forest Gravelly Floodplain High, F220XY427AK
20WD1:								
Perouse	35	0-3	1-20	850-1815	Outwash delta	Poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
Scidmore	35	0-5	2-40	850-1815	Talf on pitted outwash plain	Moderately well drained	Outwash	Maritime Forest Gravelly Plain, F220XY432AK
Perouse, frequently ponded	20	0-3	1-20	850-1815	Outwash delta	Very poorly drained	Outwash	Maritime Forest Sandy Coastal Plain, F220XY455AK
22HIA:								
Lithic Cryorthents, rugged summit	15	36-140	350-1200	5207-6223	Mountaintop and upper third of mountainflank on mountain slope	Well drained	Colluvium and/or residuum	Alpine Dwarf Scrub Gravelly Slopes, Bedrock, R222XY356AK
22SM1:								
Woodlake	60	20-40	400-450	850-1815	Mountaintop on mountain slope	Well drained	Colluvium over residuum	Alpine Dwarf Scrub Gravelly Slopes, Bedrock, R222XY356AK
Flapjack	30	5-20	395-450	850-1815	Mountaintop on swale on mountain slope	Somewhat poorly drained	Colluvium over residuum	Subalpine Dwarf Tree Scrub Gravelly Slopes, F222XY350AK

Table 4.—Ecological Site-Soil Correlation

(Only soils and miscellaneous land types with correlated ecological sites are shown)

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20AF1:			
65%-Muirpoint	Maritime Forest Sandy Plain Alluvial Fan	Forestland	F220XY430AK
15%-Puffin	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
10%-Bertha	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
20AF2:			
90%-Entisols, alluvial fans, occasionally flooded	Maritime Shrub Gravelly Drainageway	Rangeland	R220XY425AK
10%-Cryods, alluvial fans	Maritime Forest Sandy Plain Alluvial Fan	Forestland	F220XY430AK
20CL1:			
60%-Strawberry	Estuarine Herbaceous Sandy Beach Plain	Rangeland	R220XY424AK
20%-Fingerock	Estuarine Herbacous Sandy Coastal Plain	Rangeland	R220XY422AK
10%-Beartrack	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
10%-Murkbay	Estuarine Herbacous Sandy Coastal Plain	Rangeland	R220XY422AK
20CP1:			
55%-Oberlin	Estuarine Herbaceous Sandy Depression	Rangeland	R220XY423AK
25%-Perouse, frequently ponded	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
15%-Perouse	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
5%-Scidmore	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20CP2:			
25%-Monashka	Estuarine Herbaceous Sandy Depression	Rangeland	R220XY423AK
25%-Murkbay	Estuarine Herbacous Sandy Coastal Plain	Rangeland	R220XY422AK
20CPF:			
45%-Icy	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
40%-Excursion	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
10%-Strawberry	Estuarine Herbaceous Sandy Beach Plain	Rangeland	R220XY424AK
5%-Astrolable	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20ED1:			
75%-Gustavus	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20%-Bartlettcove	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
5%-Scidmore	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20ED2:			
60%-Beardslee	Maritime Forest Sandy Plains Eolian	Forestland	F220XY466AK
40%-Monashka	Estuarine Herbaceous Sandy Depression	Rangeland	R220XY423AK
20FP1:			
70%-Drybay	Maritime Forest Gravelly Alluvial Plain	Forestland	F220XY460AK
30%-Tidalwave	Maritime Forest Gravelly Alluvial Plain	Forestland	F220XY460AK
20FP2:			
55%-Bertha	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
30%-Puffin	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
20FP3:			
60%-Tidalwave	Maritime Forest Gravelly Alluvial Plain	Forestland	F220XY460AK
25%-Ashmun, frequently ponded	Maritime Shrub Sandy Drainageways	Rangeland	R220XY461AK
15%-Drybay	Maritime Forest Gravelly Alluvial Plain	Forestland	F220XY460AK
20FPL:			
40%-Cryaquepts	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
30%-Typic Cryaquents, gravelly, very poorly drained	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
20FPM:			
85%-Typic Cryaquents, silty	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
10%-Aquic Cryorthents, sandy	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
20FPY:			
60%-Oxyaquic Cryorthents, sandy or gravelly	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
25%-Typic Cryaquents, sandy or gravelly	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
10%-Typic Cryopsamments, rarely flooded	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20FPZ:			
60%-Typic Cryorthents, gravelly	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
30%-Typic Cryofluvents	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
10%-Typic Haplocryods, sandy or gravelly	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
20GP1:			
35%-Gustavus	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
35%-Ibach	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
25%-Scidmore	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20HI1:			
65%-Foad	Maritime Forest Gravelly Slopes	Forestland	F220XY441AK
20%-Boussole	Maritime Forest Loamy Slopes Steep	Forestland	F220XY442AK
10%-Kashoto	Maritime Woodland Peat Plain Depression	Forestland	F220XY434AK
20HI2:			
35%-Kashoto	Maritime Woodland Peat Plain Depression	Forestland	F220XY434AK
25%-Foad	Maritime Forest Gravelly Slopes	Forestland	F220XY441AK
20%-Kutskloh	Maritime Forest Loamy Organic Slopes	Forestland	F220XY447AK
10%-Boussole	Maritime Forest Loamy Slopes Steep	Forestland	F220XY442AK
10%-Charpentier	Maritime Woodland Peat Plain Depression	Forestland	F220XY434AK
20HI3:			
35%-Polkapenn	Maritime Forest Loamy Plains	Forestland	F220XY440AK
25%-Dagelet	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
20%-Nunatak	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
10%-Seclusion	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
20HI5:			
45%-Kaknau	Maritime Forest Loamy Slopes Warm	Forestland	F220XY468AK
35%-Tricklake	Maritime Forest Gravelly Slopes	Forestland	F220XY441AK
10%-Crillon	Maritime Scrub Loamy Slopes	Rangeland	R220XY465AK
10%-Grandplateau	Maritime Forest Loamy Slopes Cold	Forestland	F220XY464AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20HIB:			
35%-Drybay	Maritime Forest Gravelly Alluvial Plain	Forestland	F220XY460AK
30%-Kaknau	Maritime Forest Loamy Slopes Warm	Forestland	F220XY468AK
25%-Vivid	Maritime Graminoid Loamy Plain Depression	Rangeland	R220XY436AK
20HID:			
55%-Grandplateau	Maritime Forest Loamy Slopes Cold	Forestland	F220XY464AK
35%-Crillon	Maritime Scrub Loamy Slopes	Rangeland	R220XY465AK
10%-Kaknau	Maritime Forest Loamy Slopes Warm	Forestland	F220XY468AK
20HIE:			
40%-Kashoto	Maritime Woodland Peat Plain Depression	Forestland	F220XY434AK
30%-Kutskloh	Maritime Forest Loamy Organic Slopes	Forestland	F220XY447AK
20%-Wachusett	Maritime Forest Loamy Slopes Steep	Forestland	F220XY442AK
10%-Maquinna	Maritime Forest Gravelly Slopes	Forestland	F220XY441AK
20HIF:			
45%-Kashoto	Maritime Woodland Peat Plain Depression	Forestland	F220XY434AK
35%-Wachusett	Maritime Forest Loamy Slopes Steep	Forestland	F220XY442AK
10%-Kutskloh	Maritime Forest Loamy Organic Slopes	Forestland	F220XY447AK
10%-Maquinna	Maritime Forest Gravelly Slopes	Forestland	F220XY441AK
20HIN:			
40%-Polkapenn	Maritime Forest Loamy Plains	Forestland	F220XY440AK
30%-Nunatak	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
10%-Escures	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
10%-Tyeen	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20HIS:			
46%-Lithic Cryorthents, rugged summit	Alpine Dwarf Scrub Gravelly Slopes, Bedrock	Rangeland	R222XY356AK
44%-Typic Humicryepts, high elevation	Maritime Scrub Loamy Slopes	Rangeland	R220XY465AK
10%-Typic Haplocryods, loamy, high elevation	Maritime Scrub Loamy Slopes	Rangeland	R220XY465AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20IS1:			
35%-Cenotaph	Maritime Forest Loamy Plain Wet	Forestland	F220XY435AK
10%-Lituya	Estuarine Herbacous Sandy Coastal Plain	Rangeland	R220XY422AK
20LF1:			
55%-Abyss	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
30%-Astrolable	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
10%-Scidmore	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20MD1:			
70%-Gustavus	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20%-Perouse	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
10%-Scidmore	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20MF1:			
55%-Geikie	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
30%-Gustavus	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
15%-Scidmore	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20MF2:			
60%-Gustavus	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
30%-Geikie	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
10%-Scidmore, drained	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20MT1:			
35%-Bearisland	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
30%-Kadachan	Maritime Scrub Gravelly Drainageways Steep	Rangeland	R220XY444AK
10%-Seclusion	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
20MT2:			
25%-Escures	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
25%-Polkapenn	Maritime Forest Loamy Plains	Forestland	F220XY440AK
20%-Nunatak	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
10%-Bearisland	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
10%-Kadachan	Maritime Scrub Gravelly Drainageways Steep	Rangeland	R220XY444AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20MT3:			
30%-Polkapenn	Maritime Forest Loamy Plains	Forestland	F220XY440AK
25%-Bearisland	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
20%-Enigma	Maritime Scrub Loamy Slopes Steep	Rangeland	R220XY443AK
10%-Seclusion	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
20MT4:			
65%-Seclusion	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
10%-Skarn	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
20MT5:			
25%-Seclusion	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
20%-Skarn	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
10%-Kadachan	Maritime Scrub Gravelly Drainageways Steep	Rangeland	R220XY444AK
10%-Muirpoint	Maritime Forest Sandy Plain Alluvial Fan	Forestland	F220XY430AK
20MT6:			
30%-Bergbay	Maritime Forest Gravelly Slopes	Forestland	F220XY441AK
25%-Boussole	Maritime Forest Loamy Slopes Steep	Forestland	F220XY442AK
20%-Toyatte	Maritime Woodland Peat Slopes	Forestland	F220XY439AK
10%-Fingers	Maritime Shrub Gravelly Drainageway	Rangeland	R220XY425AK
10%-Kashoto	Maritime Woodland Peat Plain Depression	Forestland	F220XY434AK
5%-Abdallah	Maritime Scrub Loamy Slopes Steep	Rangeland	R220XY443AK
20MT7:			
35%-Foad	Maritime Forest Gravelly Slopes	Forestland	F220XY441AK
25%-Abdallah	Maritime Scrub Loamy Slopes Steep	Rangeland	R220XY443AK
20%-Justicecreek	Maritime Forest Loamy Plains	Forestland	F220XY440AK
10%-Kutskloh	Maritime Forest Loamy Organic Slopes	Forestland	F220XY447AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20MTC:			
35%-Skarn	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
25%-Polkapenn	Maritime Forest Loamy Plains	Forestland	F220XY440AK
20%-Kadachan	Maritime Scrub Gravelly Drainageways Steep	Rangeland	R220XY444AK
10%-Enigma	Maritime Scrub Loamy Slopes Steep	Rangeland	R220XY443AK
20MTE:			
40%-Wachusett	Maritime Forest Loamy Slopes Steep	Forestland	F220XY442AK
30%-Maquinna	Maritime Forest Gravelly Slopes	Forestland	F220XY441AK
20%-Boussole	Maritime Forest Loamy Slopes Steep	Forestland	F220XY442AK
10%-Fingers	Maritime Shrub Gravelly Drainageway	Rangeland	R220XY425AK
20MTF:			
35%-Wachusett	Maritime Forest Loamy Slopes Steep	Forestland	F220XY442AK
25%-Maquinna	Maritime Forest Gravelly Slopes	Forestland	F220XY441AK
20%-Enigma	Maritime Scrub Loamy Slopes Steep	Rangeland	R220XY443AK
10%-Escures	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
10%-Fingers	Maritime Shrub Gravelly Drainageway	Rangeland	R220XY425AK
20OC1:			
55%-Scidmore	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
35%-Perouse, frequently ponded	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
10%-Scidmore, drained	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20OD1:			
45%-Gustavus	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
45%-Lamplugh	Maritime Forest Loamy Plain Wet	Forestland	F220XY435AK
10%-Perouse, frequently ponded	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20ODF:			
50%-Glacierbay	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
30%-Geikie	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
10%-Excursion	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
10%-Topsy	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
20OP1:			
30%-Fossil	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
25%-Tyeen	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20%-Vivid	Maritime Graminoid Loamy Plain Depression	Rangeland	R220XY436AK
10%-Fingers	Maritime Shrub Gravelly Drainageway	Rangeland	R220XY425AK
5%-Lituya	Estuarine Herbacous Sandy Coastal Plain	Rangeland	R220XY422AK
20OP4:			
50%-Kashoto	Maritime Woodland Peat Plain Depression	Forestland	F220XY434AK
30%-Annoksek	Maritime Forest Loamy Plains	Forestland	F220XY440AK
15%-Bulky	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
5%-Murkbay	Estuarine Herbacous Sandy Coastal Plain	Rangeland	R220XY422AK
20OP5:			
35%-Fossil	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
25%-Tyeen	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20%-Vivid	Maritime Graminoid Loamy Plain Depression	Rangeland	R220XY436AK
10%-Puffin	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
20OP6:			
35%-Bulky	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
30%-Bertha	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
15%-Icy	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
10%-Puffin	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20OPE:			
40%-Tyeen	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
30%-Shagcove	Maritime Forest Loamy Plain Wet	Forestland	F220XY435AK
20%-Puffin	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
20OV1:			
60%-Perouse, frequently ponded	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
40%-Perouse	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
20OW1:			
40%-Perouse	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
30%-Gustavus	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20%-Perouse, frequently ponded	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
10%-Scidmore, drained	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20OWF:			
70%-Fairweather	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
30%-Icy	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
20PL1:			
40%-Tyeen	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
25%-Cenotaph	Maritime Forest Loamy Plain Wet	Forestland	F220XY435AK
20%-Fossil	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
10%-Lituya	Estuarine Herbacous Sandy Coastal Plain	Rangeland	R220XY422AK
20PL2:			
35%-Tyeen	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
30%-Fossil	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
15%-Fingers	Maritime Shrub Gravelly Drainageway	Rangeland	R220XY425AK
10%-Vivid	Maritime Graminoid Loamy Plain Depression	Rangeland	R220XY436AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20PL3:			
35%-Kashoto	Maritime Woodland Peat Plain Depression	Forestland	F220XY434AK
25%-Annoksek	Maritime Forest Loamy Plains	Forestland	F220XY440AK
20%-Ancon	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
10%-Fingers	Maritime Shrub Gravelly Drainageway	Rangeland	R220XY425AK
20PL6:			
60%-Tidalwave	Maritime Forest Gravelly Alluvial Plain	Forestland	F220XY460AK
25%-Drybay	Maritime Forest Gravelly Alluvial Plain	Forestland	F220XY460AK
15%-Puffin	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
20PLD:			
55%-Typic Cryaquents, sandy	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
30%-Typic Cryorthents, sandy, rarely flooded	Maritime Forest Sandy Plains Eolian	Forestland	F220XY466AK
10%-Oxyaquic Cryopsamments	Maritime Forest Sandy Plains Eolian	Forestland	F220XY466AK
5%-Typic Cryopsamments	Maritime Forest Sandy Plains Eolian	Forestland	F220XY466AK
20RW2:			
25%-Oxyaquic Cryorthents, sandy or gravelly	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
5%-Typic Cryaquents, gravelly, frequently flooded	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
20SC:			
30%-Typic Cryopsamments, rarely flooded	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
20TE2:			
50%-Tidalwave	Maritime Forest Gravelly Alluvial Plain	Forestland	F220XY460AK
30%-Drybay	Maritime Forest Gravelly Alluvial Plain	Forestland	F220XY460AK
10%-Ashmun, frequently ponded	Maritime Shrub Sandy Drainageways	Rangeland	R220XY461AK
10%-Puffin	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20TF1:			
15%-Astrolable	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
15%-Murkbay	Estuarine Herbacous Sandy Coastal Plain	Rangeland	R220XY422AK
20TF3:			
20%-Astrolable	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
15%-Beartrack	Estuarine Herbacous Gravelly Coastal Plain	Rangeland	R220XY329AK
10%-Lituya	Estuarine Herbacous Sandy Coastal Plain	Rangeland	R220XY422AK
20TH1:			
40%-Ibach	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
30%-Lamplugh	Maritime Forest Loamy Plain Wet	Forestland	F220XY435AK
20%-Bartlettcove	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
10%-Gustavus	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20UL1:			
10%-Scidmore, drained	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20UM1:			
25%-Bearisland	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
10%-Skarn	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
5%-Seclusion	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
20UM2:			
25%-Bearisland	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
10%-Skarn	Maritime Forest Loamy Slopes	Forestland	F220XY433AK
5%-Seclusion	Maritime Scrub Loamy Escarpments	Rangeland	R220XY446AK
20VBA:			
50%-Typic Cryofluvents	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
30%-Aquic Dystrocryepts, silty	Maritime Forest Gravelly Floodplain High	Forestland	F220XY427AK
10%-Typic Cryaquents, gravelly	Maritime Shrub Gravelly Floodplain Low	Rangeland	R220XY426AK
10%-Typic Haplocryods, sandy	Maritime Forest Gravelly Plain	Forestland	F220XY432AK

Table 4.—Ecological Site-Soil Correlation—Continued

Map unit symbol and component percent and name	Ecological site name	Ecological site type	Ecological site ID
20WD1:			
35%-Perouse	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
35%-Scidmore	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
20%-Perouse, frequently ponded	Maritime Forest Sandy Coastal Plain	Forestland	F220XY455AK
10%-Gustavus	Maritime Forest Gravelly Plain	Forestland	F220XY432AK
22HIA:			
15%-Lithic Cryorthents, rugged summit	Alpine Dwarf Scrub Gravelly Slopes, Bedrock	Rangeland	R222XY356AK
5%-Lithic Cryosaprists, rugged summit	Alpine Dwarf Scrub Organic Slopes	Rangeland	R222XY352AK
22SM1:			
60%-Woodlake	Alpine Dwarf Scrub Gravelly Slopes, Bedrock	Rangeland	R222XY356AK
30%-Flapjack	Subalpine Dwarf Tree Scrub Gravelly Slopes	Forestland	F222XY350AK

Table 5.—Land Capability Classification

(Land capability classification is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time. Classification is for nonirritated areas)

Map symbol and soil name	Land capability
20AF1:	
Muirpoint	6s
Puffin	7s
20AF2:	
Entisols, alluvial fans, occasionally flooded	7e
20CL1:	
Strawberry	3e
Fingerock	6s
20CP1:	
Oberlin	6s
Perouse, frequently ponded	5w
Perouse	5w
20CP2:	
Beaches.	
Monashka	5w
Murkbay	6s
20CPF:	
Icy	6s
Excursion	6s
20ED1:	
Gustavus	6e
Bartlettcove	6e
20ED2:	
Beardslee	6s
Monashka	5w
20FP1:	
Drybay	6s
Tidalwave	4s
20FP2:	
Bertha	6s
Puffin	7s

Table 5.—Land Capability Classification—Continued

Map symbol and soil name	Land capability
20FP3:	
Tidalwave	4s
Ashmun, frequently ponded	6s
Drybay	6s
20FPL:	
Cryaquepts	6s
Typic Cryaquents, gravelly, very poorly drained	7s
Water.	
20FPM:	
Typic Cryaquents, silty	5w
20FPY:	
Oxyaquic Cryorthents, sandy or gravelly	6s
Typic Cryaquents, sandy or gravelly	5w
20FPZ:	
Typic Cryorthents, gravelly	7s
Typic Cryofluvents	6s
20GP1:	
Gustavus	6e
Ibach	7s
Scidmore	6s
20HI1:	
Foad	7e
Boussole	7e
20HI2:	
Kashoto	7s
Foad	7e
Kutskloh	7e
20HI3:	
Polkapenn	7e
Dagelet	7e
Nunatak	7e
20HI5:	
Kaknau	7e
Tricklake	7e

Table 5.—Land Capability Classification—Continued

Map symbol and soil name	Land capability
20HIB:	
Drybay	6s
Kaknau	7e
Vivid	6e
20HID:	
Grandplateau	7e
Crillon	7e
20HIE:	
Kashoto	7s
Kutskloh	7e
Wachusett	7e
20HIF:	
Kashoto	7s
Wachusett	6e
20HIN:	
Polkapenn	7e
Nunatak	7e
20HIS:	
Lithic Cryorthents, rugged summit	8
Typic Humicryepts, high elevation	8
20IS1:	
Cenotaph	5w
Water, saline.	
Beaches.	
20LF1:	
Abyss	6s
Astrolable	6s
20MD1:	
Gustavus	6s
Perouse	5w
20MF1:	
Geikie	4e
Gustavus	6s
Scidmore	6s
20MF2:	
Gustavus	6s
Geikie	4s

Table 5.—Land Capability Classification—Continued

Map symbol and soil name	Land capability
20MT1:	
Bearisland	7e
Kadachan	7e
Rubble land.	
20MT2:	
Escures	7e
Polkapenn	7e
Nunatak	7e
20MT3:	
Polkapenn	7e
Bearisland	7e
Enigma	7e
20MT4:	
Seclusion	7e
Rock outcrop.	
20MT5:	
Rock outcrop.	
Seclusion	7e
Skarn	7e
20MT6:	
Bergbay	7e
Boussole	7e
Toyatte	7e
20MT7:	
Foad	7e
Abdallah	7e
Justicecreek	7s
20MTC:	
Skarn	7e
Polkapenn	7e
Kadachan	7e
20MTE:	
Wachusett	7e
Maquinna	7e
Boussole	7e

Table 5.—Land Capability Classification—Continued

Map symbol and soil name	Land capability
20MTF:	
Wachusett	7e
Maquinna	7e
Enigma	7e
20OC1:	
Scidmore	6s
Perouse, frequently ponded	5w
20OD1:	
Gustavus	6e
Lamplugh	5w
20ODF:	
Glacierbay	5w
Geikie	6e
20OP1:	
Fossil	6s
Tyeen	6s
Vivid	5w
20OP4:	
Kashoto	7s
Annoksek	7s
Bulky	5w
20OP5:	
Fossil	6e
Tyeen	7e
Vivid	6e
20OP6:	
Bulky	5w
Bertha	6s
Icy	6s
20OPE:	
Tyeen	6s
Shagcove	6s
Puffin	7s
20OV1:	
Perouse, frequently ponded	5w
Perouse	5w

Table 5.—Land Capability Classification—Continued

Map symbol and soil name	Land capability
20OW1:	
Perouse	5w
Gustavus	6s
Perouse, frequently ponded	5w
20OWF:	
Fairweather	5w
Icy	6s
20PL1:	
Tyeen	6e
Cenotaph	5w
Fossil	6s
20PL2:	
Tyeen	6e
Fossil	6s
Fingers	7s
20PL3:	
Kashoto	7s
Annoksek	7s
Ancon	6e
20PL6:	
Tidalwave	4e
Drybay	6s
Puffin	7s
20PLD:	
Typic Cryaquents, sandy	5w
Typic Cryorthents, sandy, rarely flooded	6s
20RW2:	
Riverwash.	
Oxyaquic Cryorthents, sandy or gravelly	6s
20SC:	
Beaches.	
Typic Cryopsamments, rarely flooded	6s
20TE2:	
Tidalwave	4s
Drybay	6s

Table 5.—Land Capability Classification—Continued

Map symbol and soil name	Land capability
20TF1:	
Water, saline.	
Astrolable	6s
Murkbay	6s
20TF3:	
Water, saline.	
Astrolable	6s
Beartrack	5w
20TH1:	
Ibach	7e
Lamplugh	5w
Bartlettcove	6e
20UL1.	
Urban land	
20UM1:	
Rock outcrop.	
Bearisland	7e
20UM2:	
Rock outcrop.	
Bearisland	7e
20VBA:	
Typic Cryofluvents	6s
Aquic Dystrocryepts, silty	3e
20WD1:	
Perouse	5w
Scidmore	6s
Perouse, frequently ponded	5w
22HIA:	
Rock outcrop, rugged summit.	
Lithic Cryorthents, rugged summit	8
22SM1:	
Woodlake	7e
Flapjack	7s
BR.	
Rock outcrop	
GL2.	
Glaciers	

Table 5.—Land Capability Classification—Continued

Map symbol and soil name	Land capability
P. Pits	
RW. Riverwash	
SW. Water, saline	
W. Water	

Table 6.—Hydric Soils

(The report lists only those map unit components that are rated as hydric. Definitions of hydric criteria codes are included at the end of the report)

Map symbol and map unit name	Component	Percent of map unit	Hydric rating	Landform	Hydric soils criteria			
					Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
20CL1: Strawberry-Fingerock complex, 0 to 5 percent slopes	Beartrack	10	Yes	fluviomarine bottoms	2	Yes	No	No
20CP1: Oberlin-Perouse, frequently ponded-Perouse complex, 0 to 2 percent slopes	Oberlin	55	Yes	marine terraces	2	Yes	No	No
	Perouse, frequently ponded	25	Yes	outwash deltas	2,3	Yes	No	Yes
	Perouse	15	Yes	outwash deltas	2	Yes	No	No
20CP2: Beaches-Monashka-Murkbay complex, 0 to 3 percent slopes	Monashka	25	Yes	dune slacks on coastal plains	2, 3	Yes	No	Yes
20CPF: Icy-Excursion complex, 0 to 1 percent slopes	Icy	45	Yes	fluviomarine terraces	2, 3	Yes	No	Yes
	Excursion	40	Yes	outwash deltas	3, 2	Yes	No	Yes
	Astrolable	5	Yes	tidal marshes	2	Yes	No	No
20ED2: Beardslee-Monashka complex, 0 to 15 percent slopes	Monashka	40	Yes	dune slacks on coastal plains	3, 2	Yes	No	Yes
20FP3: Tidalwave-Ashmun, frequently ponded-Drybay complex, 0 to 10 percent slopes	Ashmun, frequently ponded	25	Yes	depressions on alluvial flats	3, 2	Yes	No	Yes
20FPL: Cryaquepts-Typic Cryaquents-Water complex, estuaries, 0 to 5 percent slopes	Cryaquepts	40	Yes	depressions on shore complexes	2	Yes	No	No
	Typic Cryaquents, gravelly, very poorly drained	30	Yes	shore complexes and flood plains	3, 2	Yes	No	Yes
20FPM: Typic Cryaquents, flood plains, 0 to 5 percent slopes	Typic Cryaquents, silty	85	Yes	flood plains on alluvial plains and outwash plains	2	Yes	No	No

Table 6.—Hydric Soils—Continued

Map symbol and map unit name	Component	Percent of map unit	Hydric rating	Landform	Hydric soils criteria			
					Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
20FPY: Oxyaquic Cryorthents-Typic Cryaquents association, flood plains, 0 to 5 percent slopes	Typic Cryaquents, sandy or gravelly	25	Yes	outwash plains and flood plains on alluvial plains	2	Yes	No	No
20HI1: Foad-Boussole complex, 25 to 65 percent slopes	Kashoto	10	Yes	muskegs on glaciated plains	1	No	No	No
20HI2: Kashoto-Foad-Kutskloh complex, 2 to 55 percent slopes	Kashoto	35	Yes	muskegs on glaciated plains	1	No	No	No
	Charpentier	10	Yes	muskegs on mountain slopes	1	No	No	No
20HI5: Kaknau-Tricklake complex, 20 to 65 percent slopes	Grandplateau	10	Yes	glacially modified hillslopes	2	Yes	No	No
20HIB: Drybay-Kaknau-Vivid complex, 5 to 35 percent slopes	Vivid	25	Yes	glacial-valley floors	2	Yes	No	No
20HID: Grandplateau-Crillon complex, 10 to 60 percent slopes	Grandplateau	55	Yes	glacially modified hillslopes	2	Yes	No	No
20HIE: Kashoto-Kutskloh-Wachusett complex, 5 to 55 percent slopes	Kashoto	40	Yes	muskegs on glaciated plains	1	No	No	No
20HIF: Kashoto-Wachusett complex, 2 to 25 percent slopes	Kashoto	45	Yes	muskegs on glaciated plains	1	No	No	No
20IS1: Cenotaph-Water, saline-Beaches complex, 0 to 5 percent slopes	Cenotaph	35	Yes	glacial-valley floors	2	Yes	No	No
20LF1: Abyss-Astrolable complex, 0 to 5 percent slopes	Astrolable	30	Yes	tidal marshes	2	Yes	No	No

Table 6.—Hydric Soils—Continued

Map symbol and map unit name	Component	Percent of map unit	Hydric rating	Landform	Hydric soils criteria			
					Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
20MD1: Gustavus-Perouse complex, 0 to 15 percent slopes	Perouse	20	Yes	outwash deltas	2	Yes	No	No
20MT6: Bergbay-Boussole-Toyatte complex, 25 to 90 percent slopes	Kashoto	10	Yes	muskegs on glaciated plains	1	No	No	No
20OC1: Scidmore-Perouse, frequently ponded complex, 0 to 3 percent slopes	Perouse, frequently ponded	35	Yes	outwash deltas	2, 3	Yes	No	Yes
20OD1: Gustavus-Lamplugh complex, 0 to 30 percent slopes	Lamplugh	45	Yes	outwash deltas	2	Yes	No	No
	Perouse, frequently ponded	10	Yes	outwash deltas	2, 3	Yes	No	Yes
20ODF: Glacierbay-Geikie complex, 0 to 15 percent slopes	Glacierbay	50	Yes	outwash deltas	2, 3	Yes	No	Yes
	Excursion	10	Yes	outwash deltas	3, 2	Yes	No	Yes
	Topsy	10	Yes	pitted outwash plains	2	Yes	No	No
20OP1: Fossil-Tyeen-Vivid complex, 0 to 15 percent slopes	Vivid	20	Yes	glacial-valley floors	2	Yes	No	No
20OP4: Kashoto-Annoksek-Bulky complex, 0 to 10 percent slopes	Kashoto	50	Yes	muskegs on glaciated plains	1	No	No	No
	Bulky	15	Yes	outwash deltas	3, 2	Yes	No	Yes
20OP5: Fossil-Tyeen-Vivid complex, 15 to 45 percent slopes	Vivid	20	Yes	glacial-valley floors	2	Yes	No	No
20OP6: Bulky-Bertha-Icy complex, 0 to 10 percent slopes	Bulky	35	Yes	outwash deltas	2, 3	Yes	No	Yes
	Icy	15	Yes	fluviomarine terraces	3, 2	Yes	No	Yes
20OV1: Perouse, frequently ponded-Perouse complex, 0 to 5 percent slopes	Perouse, frequently ponded	60	Yes	outwash deltas	3, 2	Yes	No	Yes
	Perouse	40	Yes	outwash deltas	2	Yes	No	No

Table 6.—Hydric Soils—Continued

Map symbol and map unit name	Component	Percent of map unit	Hydric rating	Landform	Hydric soils criteria			
					Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
20OW1: Perouse-Gustavus-Perouse, frequently ponded complex, 0 to 5 percent slopes	Perouse	40	Yes	outwash deltas	2	Yes	No	No
	Perouse, frequently ponded	20	Yes	outwash deltas	2, 3	Yes	No	Yes
20OWF: Fairweather-Icy complex, 0 to 5 percent slopes	Fairweather	70	Yes	pitted outwash plains	2, 3	Yes	No	Yes
	Icy	30	Yes	fluviomarine terraces	3, 2	Yes	No	Yes
20PL1: Tyeen-Cenotaph-Fossil complex, 0 to 30 percent slopes	Cenotaph	25	Yes	glacial-valley floors	2	Yes	No	No
20PL2: Tyeen-Fossil-Fingers complex, 0 to 30 percent slopes	Vivid	10	Yes	glacial-valley floors	2	Yes	No	No
20PL3: Kashoto-Annoksek-Ancon complex, 0 to 25 percent slopes	Kashoto	35	Yes	muskegs on glaciated plains	1	No	No	No
20PLD: Typic Cryaquents-Typic Cryorthents association, flat lowlands, 0 to 5 percent slopes	Typic Cryaquents, sandy	55	Yes	depressions on outwash plains and dune slacks on beach plains	2, 3	Yes	No	Yes
20RW2: Riverwash-Oxyaquic Cryorthents complex, 0 to 5 percent slopes	Riverwash	60	Yes	---	4	No	Yes	No
	Typic Cryaquents, gravelly, frequently flooded	5	Yes	outwash plains and flood plains on alluvial plains	2	Yes	No	No
20TE2: Tidalwave-Drybay complex, 0 to 5 percent slopes	Ashmun, frequently ponded	10	Yes	depressions on alluvial flats	3, 2	Yes	No	Yes
20TF1: Water, saline-Astrolable-Murkbay complex, 0 to 5 percent slopes	Astrolable	15	Yes	tidal marshes	2	Yes	No	No

Table 6.—Hydric Soils—Continued

Map symbol and map unit name	Component	Percent of map unit	Hydric rating	Landform	Hydric soils criteria			
					Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
20TF3: Water, saline-Astrolable-Beartrack complex, 0 to 3 percent slopes	Astrolable	20	Yes	tidal marshes	2	Yes	No	No
	Beartrack	15	Yes	fluviomarine bottoms	2	Yes	No	No
20TH1: Ibach-Lamplugh-Bartlettcove complex, 2 to 35 percent slopes	Lamplugh	30	Yes	outwash deltas	2	Yes	No	No
20VBA: Typic Cryofluvents-Aquic Dystrocryepts association, flood plains, 0 to 5 percent slopes	Typic Cryaquents, gravelly	10	Yes	outwash plains and drainageways on alluvial flats	2	Yes	No	No
20WD1: Perouse-Scidmore-Perouse, frequently ponded complex, 0 to 5 percent slopes	Perouse	35	Yes	outwash deltas	2	Yes	No	No
	Perouse, frequently ponded	20	Yes	outwash deltas	2, 3	Yes	No	Yes
22HIA: Rock outcrop and Lithic Cryorthents	Lithic Cryosaprists, rugged summit	5	Yes	depressions on mountain slopes	3, 1	No	No	Yes

Explanation of hydric criteria codes:

1. All Histels except for Folistels and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   - A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season; or
   - B. are poorly drained or very poorly drained and have either:
     - 1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches; or
     - 2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches; or
     - 3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for periods of long or very long duration during the growing season.
4. Soils that are frequently flooded for periods of long or very long duration during the growing season.

3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for periods of long or very long duration during the growing season.
4. Soils that are frequently flooded for periods of long or very long duration during the growing season.

Table 7.—Land Management, Part I (Planting)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:							
Muirpoint-----------	65	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50
		Sandiness	0.50	Sandiness	0.50		
				Slope	0.20		
Puffin--------------	15	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Rock fragments	1.00	Low strength	0.50
		Rock fragments	0.50	Sandiness	0.50		
				Slope	0.01		
20AF2:							
Entisols, alluvial fans, occasionally flooded------------	90	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	0.81	Low strength	0.50
				Slope	0.80		
				Sandiness	0.10		
20CL1:							
Strawberry----------	60	Well suited		Well suited		Moderate	
						Low strength	0.50
Fingerock-----------	20	Well suited		Moderately suited		Moderate	
				Sandiness	0.03	Low strength	0.50
20CP1:							
Oberlin-------------	55	Well suited		Well suited		Moderate	
						Low strength	0.50
Perouse, frequently ponded-------------	25	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
Perouse-------------	15	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
20CP2:							
Beaches-------------	50	Not rated		Not rated		Not rated	
Monashka------------	25	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
Murkbay-------------	25	Moderately suited		Moderately suited		Moderate	
		Sandiness	0.50	Sandiness	0.38	Low strength	0.50

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20CPF:							
Icy	45	Well suited		Well suited		Severe	
						Low strength	1.00
Excursion	40	Moderately suited		Unsuited		Severe	
		Wetness	0.50	Wetness	1.00	Low strength	1.00
						Wetness	0.50
20ED1:							
Gustavus	75	Well suited		Poorly suited		Severe	
				Slope	0.70	Low strength	1.00
Bartlettcove	20	Well suited		Poorly suited		Severe	
				Slope	0.70	Low strength	1.00
20ED2:							
Beardslee	60	Well suited		Moderately suited		Severe	
				Slope	0.01	Low strength	1.00
Monashka	40	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
20FP1:							
Drybay	70	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Rock fragments	0.99	Low strength	1.00
				Slope	0.01		
Tidalwave	30	Well suited		Well suited		Severe	
						Low strength	1.00
20FP2:							
Bertha	55	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50
		Sandiness	0.50	Sandiness	0.50		
				Slope	0.01		
Puffin	30	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Rock fragments	1.00	Low strength	0.50
		Rock fragments	0.50	Sandiness	0.50		
20FP3:							
Tidalwave	60	Well suited		Well suited		Severe	
						Low strength	1.00
Ashmun, frequently ponded	25	Poorly suited		Unsuited		Moderate	
		Wetness	0.75	Wetness	1.00	Wetness	0.50
		Sandiness	0.50	Sandiness	0.50	Low strength	0.50
				Rock fragments	0.16		
Drybay	15	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Rock fragments	0.99	Low strength	1.00
20FPL:							
Cryaquepts	40	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Wetness	0.94	Low strength	1.00
		Wetness	0.50	Rock fragments	0.85	Wetness	0.50

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20FPL:							
Typic Cryaquents, gravelly, very poorly drained	30	Poorly suited		Unsuited		Moderate	
		Wetness	0.75	Wetness	1.00	Wetness	0.50
		Rock fragments	0.50	Rock fragments	1.00	Strength	0.10
		Sandiness	0.50	Sandiness	0.50		
Water	30	Not rated		Not rated		Not rated	
20FPM:							
Typic Cryaquents, silty	85	Moderately suited		Unsuited		Severe	
		Wetness	0.50	Wetness	1.00	Low strength	1.00
						Wetness	0.50
20FPY:							
Oxyaquic Cryorthents, sandy or gravelly	60	Moderately suited		Unsuited		Severe	
		Sandiness	0.50	Rock fragments	0.96	Low strength	1.00
		Rock fragments	0.50	Sandiness	0.50		
Typic Cryaquents, sandy or gravelly	25	Moderately suited		Unsuited		Moderate	
		Wetness	0.50	Wetness	0.80	Low strength	0.50
						Wetness	0.50
20FPZ:							
Typic Cryorthents, gravelly	60	Moderately suited		Unsuited		Slight	
		Sandiness	0.50	Rock fragments	1.00	Strength	0.10
		Rock fragments	0.50	Sandiness	0.50		
Typic Cryofluvents	30	Well suited		Well suited		Severe	
						Low strength	1.00
20GP1:							
Gustavus	35	Well suited		Unsuited		Severe	
				Slope	0.85	Low strength	1.00
Ibach	35	Unsuited		Unsuited		Moderate	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	0.50
				Slope	0.85		
Scidmore	25	Well suited		Moderately suited		Moderate	
				Sandiness	0.01	Low strength	0.50
20HI1:							
Foad	65	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50
				Slope	0.97		
Boussole	20	Unsuited		Unsuited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Wetness	0.50	Restrictive layer	1.00	Wetness	0.50
		Slope	0.50				

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HI2:							
Kashoto	35	Well suited		Moderately suited		Severe	
				Slope	0.01	Low strength	1.00
Foad	25	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50
		Slope	0.50	Slope	1.00		
Kutskloh	20	Unsuited		Unsuited		Severe	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	1.00
				Slope	0.85		
20HI3:							
Polkapenn	35	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	1.00		
				Sandiness	0.08		
Dagelet	25	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Slope	0.92	Low strength	0.50
				Rock fragments	0.81		
				Sandiness	0.01		
Nunatak	20	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	0.99		
				Sandiness	0.23		
20HI5:							
Kaknau	45	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Rock fragments	0.96		
Tricklake	35	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
20HIB:							
Drybay	35	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Rock fragments	0.99	Low strength	1.00
				Slope	0.20		
Kaknau	30	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Rock fragments	0.96	Low strength	1.00
				Slope	0.85		
Vivid	25	Poorly suited		Unsuited		Severe	
		Wetness	0.75	Wetness	1.00	Low strength	1.00
		Rock fragments	0.50	Rock fragments	0.96	Wetness	0.50
				Slope	0.01		
20HID:							
Grandplateau	55	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Rock fragments	1.00		
Crillon	35	Well suited		Unsuited		Severe	
				Slope	0.97	Low strength	1.00
				Rock fragments	0.45		

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HIE:							
Kashoto	40	Well suited		Moderately suited		Severe	
				Slope	0.01	Low strength	1.00
Kutskloh	30	Unsuited		Unsuited		Severe	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	1.00
				Slope	0.70		
Wachusett	20	Moderately suited		Unsuited		Severe	
		Wetness	0.50	Slope	0.97	Low strength	1.00
				Rock fragments	0.11	Wetness	0.50
20HIF:							
Kashoto	45	Well suited		Moderately suited		Severe	
				Slope	0.01	Low strength	1.00
Wachusett	35	Moderately suited		Unsuited		Severe	
		Wetness	0.50	Slope	0.85	Low strength	1.00
				Rock fragments	0.11	Wetness	0.50
20HIN:							
Polkapenn	40	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	1.00		
				Sandiness	0.08		
Nunatak	30	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	0.99		
				Sandiness	0.23		
20HIS:							
Lithic Cryorthents, rugged summit	46	Poorly suited		Unsuited		Slight	
		Slope	0.75	Slope	1.00	Strength	0.10
		Rock fragments	0.50	Rock fragments	0.80		
Typic Humicryepts, high elevation	44	Poorly suited		Unsuited		Severe	
		Slope	0.75	Slope	1.00	Low strength	1.00
		Rock fragments	0.50	Rock fragments	0.81		
20IS1:							
Cenotaph	35	Moderately suited		Moderately suited		Severe	
		Wetness	0.50	Wetness	0.47	Low strength	1.00
				Rock fragments	0.27	Wetness	0.50
Water, saline	35	Not rated		Not rated		Not rated	
Beaches	20	Not rated		Not rated		Not rated	
20LF1:							
Abyss	55	Moderately suited		Well suited		Severe	
		Wetness	0.50			Low strength	1.00
						Wetness	0.50
Astrolable	30	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Rock fragments	1.00	Low strength	0.50

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MD1:							
Gustavus	70	Well suited		Moderately suited Slope	 0.40	Severe Low strength	 1.00
Perouse	20	Moderately suited Sandiness Wetness	 0.50 0.50	Unsuited Wetness Sandiness	 1.00 0.50	Moderate Wetness Low strength	 0.50 0.50
20MF1:							
Geikie	55	Well suited		Moderately suited Slope	 0.01	Severe Low strength	 1.00
Gustavus	30	Well suited		Moderately suited Slope	 0.01	Severe Low strength	 1.00
Scidmore	15	Well suited		Moderately suited Sandiness	 0.01	Moderate Low strength	 0.50
20MF2:							
Gustavus	60	Well suited		Moderately suited Slope	 0.01	Severe Low strength	 1.00
Geikie	30	Well suited		Well suited		Severe Low strength	 1.00
20MT1:							
Bearisland	35	Moderately suited Sandiness Slope Rock fragments	 0.50 0.50 0.50	Unsuited Slope Rock fragments Sandiness	 1.00 0.99 0.50	Moderate Low strength	 0.50
Kadachan	30	Unsuited Rock fragments Slope	 1.00 0.50	Unsuited Rock fragments Slope Sandiness	 1.00 1.00 0.13	Moderate Low strength	 0.50
Rubble land	25	Not rated		Not rated		Not rated	
20MT2:							
Escures	25	Moderately suited Slope Rock fragments	 0.50 0.50	Unsuited Slope Rock fragments Sandiness	 1.00 0.90 0.02	Moderate Low strength	 0.50
Polkapenn	25	Moderately suited Slope Rock fragments	 0.50 0.50	Unsuited Slope Rock fragments Sandiness	 1.00 1.00 0.08	Moderate Low strength	 0.50
Nunatak	20	Moderately suited Slope Rock fragments	 0.50 0.50	Unsuited Slope Rock fragments Sandiness	 1.00 0.99 0.23	Moderate Low strength	 0.50
20MT3:							
Polkapenn	30	Moderately suited Slope Rock fragments	 0.50 0.50	Unsuited Slope Rock fragments Sandiness	 1.00 1.00 0.08	Moderate Low strength	 0.50

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MT3:							
Bearisland	25	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Sandiness	0.50	Rock fragments	0.99		
		Rock fragments	0.50	Sandiness	0.50		
Enigma	20	Moderately suited		Unsuited		Slight	
		Rock fragments	0.50	Slope	1.00	Strength	0.10
		Slope	0.50	Rock fragments	1.00		
		Sandiness	0.50	Sandiness	0.27		
20MT4:							
Seclusion	65	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Rock fragments	0.50	Rock fragments	0.81		
				Sandiness	0.09		
Rock outcrop	25	Not rated		Not rated		Not rated	
20MT5:							
Rock outcrop	35	Not rated		Not rated		Not rated	
Seclusion	25	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Rock fragments	0.50	Rock fragments	0.81		
				Sandiness	0.09		
Skarn	20	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Rock fragments	0.81		
20MT6:							
Bergbay	30	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	1.00		
Boussole	25	Unsuited		Unsuited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Wetness	0.50	Restrictive layer	1.00	Wetness	0.50
		Slope	0.50				
Toyatte	20	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
20MT7:							
Foad	35	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	1.00		
Abdallah	25	Unsuited		Unsuited		Slight	
		Rock fragments	1.00	Slope	1.00	Strength	0.10
		Slope	0.50	Rock fragments	1.00		
Justicecreek	20	Unsuited		Unsuited		Severe	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	1.00
		Stickiness; high plasticity index	0.75	Slope	1.00		
		Slope	0.50	Stickiness; high plasticity index	0.75		

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MTC:							
Skarn	35	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Rock fragments	0.81		
Polkapenn	25	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	1.00		
				Sandiness	0.08		
Kadachan	20	Unsuited		Unsuited		Moderate	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	0.50
		Slope	0.50	Slope	1.00		
				Sandiness	0.13		
20MTE:							
Wachusett	40	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Wetness	0.50	Rock fragments	0.11	Wetness	0.50
Maquinna	30	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Rock fragments	0.58		
Boussole	20	Unsuited		Unsuited		Severe	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	1.00
		Wetness	0.50	Slope	0.92	Wetness	0.50
20MTF:							
Wachusett	35	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Wetness	0.50	Rock fragments	0.11	Wetness	0.50
Maquinna	25	Moderately suited		Unsuited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Rock fragments	0.58		
Enigma	20	Moderately suited		Unsuited		Slight	
		Rock fragments	0.50	Slope	1.00	Strength	0.10
		Slope	0.50	Rock fragments	1.00		
		Sandiness	0.50	Sandiness	0.27		
20OC1:							
Scidmore	55	Well suited		Moderately suited		Moderate	
				Sandiness	0.01	Low strength	0.50
Perouse, frequently ponded	35	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
20OD1:							
Gustavus	45	Well suited		Poorly suited		Severe	
				Slope	0.70	Low strength	1.00
Lamplugh	45	Moderately suited		Moderately suited		Severe	
		Stickiness; high plasticity index	0.50	Wetness	0.25	Low strength	1.00
				Slope	0.20		

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20ODF:							
Glacierbay----------	50	Moderately suited		Unsuited		Severe	
		Wetness	0.50	Wetness	1.00	Low strength	1.00
						Wetness	0.50
Geikie--------------	30	Well suited		Moderately suited		Severe	
				Slope	0.01	Low strength	1.00
20OP1:							
Fossil--------------	30	Moderately suited		Unsuited		Severe	
		Sandiness	0.50	Rock fragments	0.90	Low strength	1.00
		Rock fragments	0.50	Sandiness	0.50		
				Slope	0.01		
Tyeen---------------	25	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	0.81	Low strength	0.50
				Slope	0.40		
				Sandiness	0.22		
Vivid---------------	20	Poorly suited		Unsuited		Severe	
		Wetness	0.75	Wetness	1.00	Low strength	1.00
		Rock fragments	0.50	Rock fragments	0.96	Wetness	0.50
20OP4:							
Kashoto-------------	50	Well suited		Well suited		Severe	
						Low strength	1.00
Annoksek------------	30	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
				Slope	0.20		
Bulky---------------	15	Moderately suited		Unsuited		Moderate	
		Wetness	0.50	Wetness	1.00	Wetness	0.50
						Low strength	0.50
20OP5:							
Fossil--------------	35	Moderately suited		Unsuited		Severe	
		Sandiness	0.50	Rock fragments	0.90	Low strength	1.00
		Rock fragments	0.50	Slope	0.70		
				Sandiness	0.50		
Tyeen---------------	25	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Slope	0.85	Low strength	0.50
				Rock fragments	0.81		
				Sandiness	0.22		
Vivid---------------	20	Poorly suited		Unsuited		Severe	
		Wetness	0.75	Wetness	1.00	Low strength	1.00
		Rock fragments	0.50	Rock fragments	0.96	Wetness	0.50
				Slope	0.70		
20OP6:							
Bulky---------------	35	Moderately suited		Unsuited		Moderate	
		Wetness	0.50	Wetness	1.00	Wetness	0.50
						Low strength	0.50
Bertha--------------	30	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50
		Sandiness	0.50	Sandiness	0.50		
				Slope	0.01		

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OP6:							
Icy	15	Well suited		Well suited		Severe	
						Low strength	1.00
20OPE:							
Tyeen	40	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	0.81	Low strength	0.50
				Sandiness	0.22		
				Slope	0.20		
Shagcove	30	Moderately suited		Poorly suited		Moderate	
		Rock fragments	0.50	Rock fragments	0.69	Low strength	0.50
				Sandiness	0.07		
Puffin	20	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Rock fragments	1.00	Low strength	0.50
		Rock fragments	0.50	Sandiness	0.50		
				Slope	0.01		
20OV1:							
Perouse, frequently ponded	60	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
Perouse	40	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
20OW1:							
Perouse	40	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
Gustavus	30	Well suited		Well suited		Severe	
						Low strength	1.00
Perouse, frequently ponded	20	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
20OWF:							
Fairweather	70	Moderately suited		Unsuited		Severe	
		Wetness	0.50	Wetness	1.00	Low strength	1.00
						Wetness	0.50
Icy	30	Well suited		Well suited		Severe	
						Low strength	1.00
20PL1:							
Tyeen	40	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	0.81	Low strength	0.50
				Slope	0.40		
				Sandiness	0.22		
Cenotaph	25	Moderately suited		Moderately suited		Severe	
		Wetness	0.50	Wetness	0.47	Low strength	1.00
				Rock fragments	0.27	Wetness	0.50

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20PL1:							
Fossil	20	Moderately suited		Unsuited		Severe	
		Sandiness	0.50	Rock fragments	0.90	Low strength	1.00
		Rock fragments	0.50	Sandiness	0.50		
				Slope	0.01		
20PL2:							
Tyeen	35	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Rock fragments	0.81	Low strength	0.50
				Slope	0.70		
				Sandiness	0.22		
Fossil	30	Moderately suited		Unsuited		Severe	
		Sandiness	0.50	Rock fragments	0.90	Low strength	1.00
		Rock fragments	0.50	Sandiness	0.50		
				Slope	0.01		
Fingers	15	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Rock fragments	0.99	Low strength	0.50
		Rock fragments	0.50	Sandiness	0.50		
				Slope	0.01		
20PL3:							
Kashoto	35	Well suited		Moderately suited		Severe	
				Slope	0.01	Low strength	1.00
Annoksek	25	Unsuited		Unsuited		Moderate	
		Restrictive layer	1.00	Restrictive layer	1.00	Low strength	0.50
				Slope	0.40		
Ancon	20	Well suited		Unsuited		Severe	
				Slope	0.85	Low strength	1.00
20PL6:							
Tidalwave	60	Well suited		Well suited		Severe	
						Low strength	1.00
Drybay	25	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Rock fragments	0.99	Low strength	1.00
Puffin	15	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Rock fragments	1.00	Low strength	0.50
		Rock fragments	0.50	Sandiness	0.50		
20PLD:							
Typic Cryaquents, sandy	55	Poorly suited		Unsuited		Moderate	
		Wetness	0.75	Wetness	1.00	Wetness	0.50
				Sandiness	0.03	Low strength	0.50
Typic Cryorthents, sandy, rarely flooded	30	Moderately suited		Moderately suited		Moderate	
		Sandiness	0.50	Sandiness	0.45	Low strength	0.50

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20RW2:							
Riverwash	60	Not rated		Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Moderately suited		Unsuited		Severe	
		Sandiness	0.50	Rock fragments	0.96	Low strength	1.00
		Rock fragments	0.50	Sandiness	0.50		
20SC:							
Beaches	60	Not rated		Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Moderately suited		Moderately suited		Moderate	
		Sandiness	0.50	Sandiness	0.50	Low strength	0.50
20TE2:							
Tidalwave	50	Well suited		Well suited		Severe	
						Low strength	1.00
Drybay	30	Moderately suited		Unsuited		Severe	
		Rock fragments	0.50	Rock fragments	0.99	Low strength	1.00
20TF1:							
Water, saline	70	Not rated		Not rated		Not rated	
Astrolable	15	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Rock fragments	1.00	Low strength	0.50
Murkbay	15	Moderately suited		Moderately suited		Moderate	
		Sandiness	0.50	Sandiness	0.38	Low strength	0.50
20TF3:							
Water, saline	55	Not rated		Not rated		Not rated	
Astrolable	20	Moderately suited		Unsuited		Moderate	
		Rock fragments	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Rock fragments	1.00	Low strength	0.50
Beartrack	15	Moderately suited		Unsuited		Severe	
		Wetness	0.50	Wetness	1.00	Low strength	1.00
						Wetness	0.50
20TH1:							
Ibach	40	Unsuited		Unsuited		Moderate	
		Rock fragments	1.00	Rock fragments	1.00	Low strength	0.50
				Slope	0.92		
Lamplugh	30	Moderately suited		Moderately suited		Severe	
		Stickiness; high plasticity index	0.50	Wetness	0.25	Low strength	1.00
Bartlettcove	20	Well suited		Unsuited		Severe	
				Slope	0.85	Low strength	1.00
20UL1:							
Urban land	90	Not rated		Not rated		Not rated	

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20UM1:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Bearisland	25	Moderately suited		Unsuited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Sandiness	0.50	Rock fragments	0.99		
		Rock fragments	0.50	Sandiness	0.50		
20UM2:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Bearisland	25	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Rock fragments	0.99	Low strength	0.50
		Rock fragments	0.50	Slope	0.92		
				Sandiness	0.50		
20VBA:							
Typic Cryofluvents	50	Well suited		Well suited		Severe	
						Low strength	1.00
Aquic Dystrocryepts, silty	30	Well suited		Moderately suited		Moderate	
				Wetness	0.19	Low strength	0.50
20WD1:							
Perouse	35	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
Scidmore	35	Well suited		Moderately suited		Moderate	
				Sandiness	0.01	Low strength	0.50
Perouse, frequently ponded	20	Moderately suited		Unsuited		Moderate	
		Sandiness	0.50	Wetness	1.00	Wetness	0.50
		Wetness	0.50	Sandiness	0.50	Low strength	0.50
22HIA:							
Rock outcrop, rugged summit	80	Not rated		Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Poorly suited		Unsuited		Slight	
		Slope	0.75	Slope	1.00	Strength	0.10
		Rock fragments	0.50	Rock fragments	0.80		
22SM1:							
Woodlake	60	Unsuited		Unsuited		Slight	
		Rock fragments	1.00	Rock fragments	1.00	Strength	0.10
		Slope	0.50	Slope	1.00		
Flapjack	30	Moderately suited		Unsuited		Slight	
		Sandiness	0.50	Rock fragments	1.00	Strength	0.10
		Rock fragments	0.50	Sandiness	0.49		
				Slope	0.01		
BR:							
Rock outcrop	100	Not rated		Not rated		Not rated	

Table 7.—Land Management, Part I (Planting)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GL2:							
Glaciers	95	Not rated		Not rated		Not rated	
P:							
Pits	90	Not rated		Not rated		Not rated	
RW:							
Riverwash	90	Not rated		Not rated		Not rated	
SW:							
Water, saline	95	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:					
Muirpoint	65	Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope	0.50
				Sandiness	0.50
Puffin	15	Moderate		Poorly suited	
		Slope/erodibility	0.50	Flooding	1.00
				Rock fragments	0.50
				Sandiness	0.50
20AF2:					
Entisols, alluvial fans, occasionally flooded	90	Severe		Poorly suited	
		Slope/erodibility	0.95	Flooding	1.00
				Slope	1.00
				Wetness	1.00
20CL1:					
Strawberry	60	Slight		Moderately suited	
				Wetness	0.50
Fingerock	20	Slight		Well suited	
20CP1:					
Oberlin	55	Slight		Poorly suited	
				Wetness	1.00
Perouse, frequently ponded	25	Slight		Poorly suited	
				Ponding	1.00
				Sandiness	0.50
Perouse	15	Slight		Moderately suited	
				Sandiness	0.50
20CP2:					
Beaches	50	Not rated		Not rated	
Monashka	25	Slight		Poorly suited	
				Ponding	1.00
				Wetness	1.00
				Sandiness	0.50
Murkbay	25	Slight		Moderately suited	
				Sandiness	0.50
20CPF:					
Icy	45	Slight		Poorly suited	
				Low strength	1.00
				Ponding	1.00
Excursion	40	Slight		Poorly suited	
				Ponding	1.00
				Low strength	0.50

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
20ED1:					
Gustavus	75	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Bartlettcove	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
20ED2:					
Beardslee	60	Moderate		Poorly suited	
		Slope/erodibility	0.50	Low strength	1.00
Monashka	40	Slight		Poorly suited	
				Ponding	1.00
				Wetness	1.00
				Sandiness	0.50
20FP1:					
Drybay	70	Moderate		Moderately suited	
		Slope/erodibility	0.50	Low strength	0.50
Tidalwave	30	Slight		Moderately suited	
				Low strength	0.50
20FP2:					
Bertha	55	Moderate		Poorly suited	
		Slope/erodibility	0.50	Flooding	1.00
				Sandiness	0.50
Puffin	30	Slight		Poorly suited	
				Flooding	1.00
				Rock fragments	0.50
				Sandiness	0.50
20FP3:					
Tidalwave	60	Slight		Moderately suited	
				Low strength	0.50
Ashmun, frequently ponded	25	Slight		Poorly suited	
				Ponding	1.00
				Wetness	1.00
				Sandiness	0.50
Drybay	15	Slight		Moderately suited	
				Low strength	0.50
20FPL:					
Cryaquepts	40	Slight		Poorly suited	
				Low strength	1.00
				Flooding	1.00
				Wetness	1.00
Typic Cryaquents, gravelly, very poorly drained	30	Slight		Poorly suited	
				Ponding	1.00
				Flooding	1.00
				Sandiness	0.50
Water	30	Not rated		Not rated	

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20FPM:					
Typic Cryaquents, silty	85	Slight		Poorly suited	
				Flooding	1.00
				Wetness	1.00
				Low strength	0.50
20FPY:					
Oxyaquic Cryorthents, sandy or gravelly	60	Slight		Poorly suited	
				Low strength	1.00
				Sandiness	0.50
Typic Cryaquents, sandy or gravelly	25	Slight		Poorly suited	
				Flooding	1.00
				Wetness	1.00
20FPZ:					
Typic Cryorthents, gravelly	60	Slight		Moderately suited	
				Sandiness	0.50
Typic Cryofluvents	30	Slight		Poorly suited	
				Low strength	1.00
				Flooding	1.00
20GP1:					
Gustavus	35	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Ibach	35	Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope	1.00
				Low strength	0.50
Scidmore	25	Slight		Moderately suited	
				Wetness	0.50
20HI1:					
Foad	65	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	0.50
Boussole	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
				Wetness	1.00
20HI2:					
Kashoto	35	Moderate		Poorly suited	
		Slope/erodibility	0.50	Low strength	1.00
				Wetness	1.00
Foad	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	0.50
Kutskloh	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
				Wetness	1.00

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HI3:					
Polkapenn	35	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Dagelet	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Nunatak	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Rock fragments	0.50
20HI5:					
Kaknau	45	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	0.50
Tricklake	35	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	0.50
20HIB:					
Drybay	35	Moderate		Moderately suited	
		Slope/erodibility	0.50	Low strength	0.50
				Slope	0.50
Kaknau	30	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	0.50
Vivid	25	Moderate		Poorly suited	
		Slope/erodibility	0.50	Ponding	1.00
				Wetness	1.00
				Low strength	0.50
20HID:					
Grandplateau	55	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Wetness	1.00
				Low strength	0.50
Crillon	35	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	0.50
				Wetness	0.50
20HIE:					
Kashoto	40	Moderate		Poorly suited	
		Slope/erodibility	0.50	Low strength	1.00
				Wetness	1.00
Kutskloh	30	Moderate		Poorly suited	
		Slope/erodibility	0.50	Low strength	1.00
				Slope	1.00
				Wetness	1.00
Wachusett	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
				Wetness	1.00

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HIF:					
Kashoto	45	Moderate		Poorly suited	
		Slope/erodibility	0.50	Low strength	1.00
				Wetness	1.00
Wachusett	35	Severe		Poorly suited	
		Slope/erodibility	0.95	Low strength	1.00
				Wetness	1.00
				Slope	1.00
20HIN:					
Polkapenn	40	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Nunatak	30	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Rock fragments	0.50
20HIS:					
Lithic Cryorthents, rugged summit	46	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Wetness	1.00
Typic Humicryepts, high elevation	44	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Wetness	0.50
20IS1:					
Cenotaph	35	Slight		Poorly suited	
				Low strength	1.00
				Wetness	1.00
Water, saline	35	Not rated		Not rated	
Beaches	20	Not rated		Not rated	
20LF1:					
Abyss	55	Slight		Poorly suited	
				Flooding	1.00
				Wetness	0.50
				Low strength	0.50
Astrolable	30	Slight		Poorly suited	
				Flooding	1.00
				Wetness	1.00
20MD1:					
Gustavus	70	Severe		Moderately suited	
		Slope/erodibility	0.95	Slope	0.50
Perouse	20	Slight		Moderately suited	
				Sandiness	0.50
20MF1:					
Geikie	55	Moderate		Moderately suited	
		Slope/erodibility	0.50	Low strength	0.50

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MF1:					
Gustavus	30	Moderate		Well suited	
		Slope/erodibility	0.50		
Scidmore	15	Slight		Moderately suited	
				Wetness	0.50
20MF2:					
Gustavus	60	Moderate		Well suited	
		Slope/erodibility	0.50		
Geikie	30	Slight		Moderately suited	
				Low strength	0.50
20MT1:					
Bearisland	35	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Sandiness	0.50
Kadachan	30	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Rubble land	25	Not rated		Not rated	
20MT2:					
Escures	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Polkapenn	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Nunatak	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Rock fragments	0.50
20MT3:					
Polkapenn	30	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Bearisland	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Sandiness	0.50
Enigma	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
20MT4:					
Seclusion	65	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
Rock outcrop	25	Not rated		Not rated	
20MT5:					
Rock outcrop	35	Not rated		Not rated	
Seclusion	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
Skarn	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT6:					
Bergbay	30	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				1.00	
Boussole	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
				Wetness	1.00
Toyatte	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
				Wetness	0.50
20MT7:					
Foad	35	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	0.50
Abdallah	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Rock fragments	0.50
Justicecreek	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
20MTC:					
Skarn	35	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Polkapenn	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Kadachan	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
20MTE:					
Wachusett	40	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
				Wetness	1.00
Maquinna	30	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
Boussole	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Low strength	1.00
				Wetness	1.00
				Slope	1.00
20MTF:					
Wachusett	35	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
				Wetness	1.00

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MTF:					
Maquinna	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	1.00
Enigma	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
20OC1:					
Scidmore	55	Slight		Moderately suited	
				Wetness	0.50
Perouse, frequently ponded	35	Slight		Poorly suited	
				Ponding	1.00
				Sandiness	0.50
20OD1:					
Gustavus	45	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
Lamplugh	45	Moderate		Poorly suited	
		Slope/erodibility	0.50	Low strength	1.00
				Wetness	1.00
				Slope	0.50
20ODF:					
Glacierbay	50	Moderate		Poorly suited	
		Slope/erodibility	0.50	Ponding	1.00
				Wetness	1.00
				Low strength	0.50
Geikie	30	Moderate		Moderately suited	
		Slope/erodibility	0.50	Low strength	0.50
20OP1:					
Fossil	30	Moderate		Moderately suited	
		Slope/erodibility	0.50	Sandiness	0.50
Tyeen	25	Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope	0.50
Vivid	20	Slight		Poorly suited	
				Ponding	1.00
				Wetness	1.00
				Low strength	0.50
20OP4:					
Kashoto	50	Slight		Poorly suited	
				Low strength	1.00
				Wetness	1.00
Annoksek	30	Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope	0.50
Bulky	15	Moderate		Poorly suited	
		Slope/erodibility	0.50	Ponding	1.00
				Wetness	1.00

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OP5:					
Fossil	35	Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope	1.00
				Sandiness	0.50
Tyeen	25	Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope	1.00
Vivid	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Ponding	1.00
				Wetness	1.00
				Low strength	0.50
20OP6:					
Bulky	35	Slight		Poorly suited	
				Ponding	1.00
				Wetness	1.00
Bertha	30	Moderate		Poorly suited	
		Slope/erodibility	0.50	Flooding	1.00
				Sandiness	0.50
Icy	15	Slight		Poorly suited	
				Low strength	1.00
				Ponding	1.00
20OPE:					
Tyeen	40	Slight		Moderately suited	
				Slope	0.50
Shagcove	30	Slight		Moderately suited	
				Wetness	0.50
Puffin	20	Moderate		Poorly suited	
		Slope/erodibility	0.50	Flooding	1.00
				Rock fragments	0.50
				Sandiness	0.50
20OV1:					
Perouse, frequently ponded	60	Slight		Poorly suited	
				Ponding	1.00
				Sandiness	0.50
Perouse	40	Slight		Moderately suited	
				Sandiness	0.50
20OW1:					
Perouse	40	Slight		Moderately suited	
				Sandiness	0.50
Gustavus	30	Moderate		Well suited	
		Slope/erodibility	0.50		
Perouse, frequently ponded	20	Slight		Poorly suited	
				Ponding	1.00
				Sandiness	0.50

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OWF:					
Fairweather	70	Slight		Poorly suited	
				Ponding	1.00
				Wetness	1.00
				Low strength	0.50
Icy	30	Slight		Poorly suited	
				Low strength	1.00
				Ponding	1.00
20PL1:					
Tyeen	40	Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope	0.50
Cenotaph	25	Slight		Poorly suited	
				Low strength	1.00
				Wetness	1.00
Fossil	20	Moderate		Moderately suited	
		Slope/erodibility	0.50	Sandiness	0.50
20PL2:					
Tyeen	35	Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope	1.00
Fossil	30	Moderate		Moderately suited	
		Slope/erodibility	0.50	Sandiness	0.50
Fingers	15	Moderate		Moderately suited	
		Slope/erodibility	0.50	Sandiness	0.50
				Wetness	0.50
20PL3:					
Kashoto	35	Moderate		Poorly suited	
		Slope/erodibility	0.50	Low strength	1.00
				Wetness	1.00
Annoksek	25	Severe		Moderately suited	
		Slope/erodibility	0.95	Slope	0.50
Ancon	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Low strength	0.50
				Wetness	0.50
20PL6:					
Tidalwave	60	Moderate		Moderately suited	
		Slope/erodibility	0.50	Low strength	0.50
Drybay	25	Slight		Moderately suited	
				Low strength	0.50
Puffin	15	Slight		Poorly suited	
				Flooding	1.00
				Rock fragments	0.50
				Sandiness	0.50

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20PLD:					
Typic Cryaquents, sandy	55	Slight		Poorly suited	
				Ponding	1.00
				Flooding	1.00
Typic Cryorthents, sandy, rarely flooded	30	Slight		Moderately suited	
				Sandiness	0.50
20RW2:					
Riverwash	60	Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Slight		Poorly suited	
				Low strength	1.00
				Sandiness	0.50
20SC:					
Beaches	60	Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Slight		Moderately suited	
				Sandiness	0.50
20TE2:					
Tidalwave	50	Slight		Moderately suited	
				Low strength	0.50
Drybay	30	Slight		Moderately suited	
				Low strength	0.50
20TF1:					
Water, saline	70	Not rated		Not rated	
Astrolable	15	Slight		Poorly suited	
				Flooding	1.00
				Wetness	1.00
Murkbay	15	Slight		Moderately suited	
				Sandiness	0.50
20TF3:					
Water, saline	55	Not rated		Not rated	
Astrolable	20	Slight		Poorly suited	
				Flooding	1.00
				Wetness	1.00
Beartrack	15	Slight		Poorly suited	
				Flooding	1.00
				Wetness	1.00
				Low strength	0.50
20TH1:					
Ibach	40	Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope	1.00
				Low strength	0.50

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20TH1:					
Lamplugh	30	Moderate		Poorly suited	
		Slope/erodibility	0.50	Low strength	1.00
				Wetness	1.00
Bartlettcove	20	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
20UL1:					
Urban land	90	Not rated		Not rated	
20UM1:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Sandiness	0.50
20UM2:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Sandiness	0.50
20VBA:					
Typic Cryofluvents	50	Slight		Poorly suited	
				Low strength	1.00
				Flooding	1.00
Aquic Dystrocryepts, silty	30	Slight		Poorly suited	
				Ponding	1.00
				Flooding	1.00
				Wetness	0.50
20WD1:					
Perouse	35	Slight		Moderately suited	
				Sandiness	0.50
Scidmore	35	Slight		Moderately suited	
				Wetness	0.50
Perouse, frequently ponded	20	Slight		Poorly suited	
				Ponding	1.00
				Sandiness	0.50
22HIA:					
Rock outcrop, rugged summit	80	Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Wetness	1.00

Table 7.—Land Management, Part II (Hazard of Erosion and Suitability for Roads)—Continued

Map symbol and soil name	Pct. of map unit	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
22SM1:					
Woodlake	60	Severe		Poorly suited	
		Slope/erodibility	0.95	Slope	1.00
				Rock fragments	1.00
Flapjack	30	Slight		Moderately suited	
				Sandiness	0.50
				Wetness	0.50
BR:					
Rock outcrop	100	Not rated		Not rated	
GL2:					
Glaciers	95	Not rated		Not rated	
P:					
Pits	90	Not rated		Not rated	
RW:					
Riverwash	90	Not rated		Not rated	
SW:					
Water, saline	95	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	

Table 7.—Land Management, Part III (Site Preparation)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:					
Muirpoint	65	Well suited		Moderately suited	
				Rock fragments	0.50
Puffin	15	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
20AF2:					
Entisols, alluvial fans, occasionally flooded	90	Moderately suited		Moderately suited	
		Slope	0.27	Slope	0.27
20CL1:					
Strawberry	60	Poorly suited		Well suited	
		Wetness	0.94		
Fingerock	20	Well suited		Well suited	
20CP1:					
Oberlin	55	Well suited		Well suited	
Perouse, frequently ponded	25	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
Perouse	15	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
20CP2:					
Beaches	50	Not rated		Not rated	
Monashka	25	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
Murkbay	25	Well suited		Well suited	
20CPF:					
Icy	45	Well suited		Well suited	
Excursion	40	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
20ED1:					
Gustavus	75	Well suited		Well suited	
Bartlettcove	20	Well suited		Well suited	
20ED2:					
Beardslee	60	Well suited		Well suited	
Monashka	40	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20FP1:					
Drybay	70	Well suited		Moderately suited Rock fragments	 0.50
Tidalwave	30	Well suited		Well suited	
20FP2:					
Bertha	55	Well suited		Well suited	
Puffin	30	Unsuited Rock fragments	 1.00	Unsuited Rock fragments	 1.00
20FP3:					
Tidalwave	60	Well suited		Well suited	
Ashmun, frequently ponded	25	Unsuited Wetness	 1.00	Moderately suited Wetness	 0.75
Drybay	15	Well suited		Moderately suited Rock fragments	 0.50
20FPL:					
Cryaquepts	40	Unsuited Wetness	 1.00	Moderately suited Wetness Rock fragments	 0.47 0.25
Typic Cryaquents, gravelly, very poorly drained	30	Unsuited Wetness	 1.00	Moderately suited Wetness Rock fragments	 0.75 0.50
Water	30	Not rated		Not rated	
20FPM:					
Typic Cryaquents, silty	85	Unsuited Wetness	 1.00	Moderately suited Wetness	 0.50
20FPY:					
Oxyaquic Cryorthents, sandy or gravelly	60	Well suited		Well suited	
Typic Cryaquents, sandy or gravelly	25	Unsuited Wetness	 1.00	Moderately suited Wetness	 0.40
20FPZ:					
Typic Cryorthents, gravelly	60	Well suited		Moderately suited Rock fragments	 0.50
Typic Cryofluvents	30	Well suited		Well suited	

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20GP1:					
Gustavus	35	Moderately suited		Moderately suited	
		Slope	0.43	Slope	0.43
Ibach	35	Moderately suited		Unsuited	
		Slope	0.43	Rock fragments	1.00
		Rock fragments	0.39	Slope	0.43
Scidmore	25	Well suited		Well suited	
20HI1:					
Foad	65	Poorly suited		Poorly suited	
		Slope	0.89	Slope	0.89
		Rock fragments	0.50	Rock fragments	0.56
		Restrictive layer	0.32		
Boussole	20	Unsuited		Unsuited	
		Wetness	1.00	Slope	1.00
		Slope	1.00	Restrictive layer	1.00
		Restrictive layer	1.00		
20HI2:					
Kashoto	35	Well suited		Well suited	
Foad	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.56
		Restrictive layer	0.32		
Kutskloh	20	Poorly suited		Unsuited	
		Rock fragments	0.92	Rock fragments	1.00
		Slope	0.43	Slope	0.43
20HI3:					
Polkapenn	35	Unsuited		Unsuited	
		Restrictive layer	1.00	Slope	1.00
		Slope	1.00	Rock fragments	0.67
		Rock fragments	0.33		
Dagelet	25	Poorly suited		Moderately suited	
		Restrictive layer	0.94	Slope	0.72
		Slope	0.72	Rock fragments	0.23
Nunatak	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.08	Rock fragments	0.50
20HI5:					
Kaknau	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Rock fragments	0.33
Tricklake	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HIB:					
Drybay	35	Well suited		Moderately suited	
				Rock fragments	0.50
Kaknau	30	Moderately suited		Moderately suited	
		Slope	0.43	Slope	0.43
				Rock fragments	0.33
Vivid	25	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.75
				Rock fragments	0.33
20HID:					
Grandplateau	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Wetness	1.00	Rock fragments	1.00
				Wetness	0.50
Crillon	35	Poorly suited		Poorly suited	
		Slope	0.89	Slope	0.89
		Wetness	0.80		
		Restrictive layer	0.13		
20HIE:					
Kashoto	40	Well suited		Well suited	
Kutskloh	30	Poorly suited		Unsuited	
		Rock fragments	0.92	Rock fragments	1.00
Wachusett	20	Unsuited		Poorly suited	
		Wetness	1.00	Slope	0.89
		Restrictive layer	0.99		
		Slope	0.89		
20HIF:					
Kashoto	45	Well suited		Well suited	
Wachusett	35	Unsuited		Moderately suited	
		Wetness	1.00	Slope	0.43
		Restrictive layer	0.99		
		Slope	0.43		
20HIN:					
Polkapenn	40	Unsuited		Unsuited	
		Restrictive layer	1.00	Slope	1.00
		Slope	1.00	Rock fragments	0.67
		Rock fragments	0.33		
Nunatak	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.08	Rock fragments	0.50
20HIS:					
Lithic Cryorthents, rugged summit	46	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	0.44

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HIS:					
Typic Humicryepts, high elevation	44	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Rock fragments	0.38
20IS1:					
Cenotaph	35	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.23
Water, saline	35	Not rated		Not rated	
Beaches	20	Not rated		Not rated	
20LF1:					
Abyss	55	Unsuited		Well suited	
		Wetness	1.00		
Astrolable	30	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
20MD1:					
Gustavus	70	Well suited		Well suited	
Perouse	20	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
20MF1:					
Geikie	55	Well suited		Well suited	
Gustavus	30	Well suited		Well suited	
Scidmore	15	Well suited		Well suited	
20MF2:					
Gustavus	60	Well suited		Well suited	
Geikie	30	Well suited		Well suited	
20MT1:					
Bearisland	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Rock fragments	0.50
Kadachan	30	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	1.00	Slope	1.00
Rubble land	25	Not rated		Not rated	
20MT2:					
Escures	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	0.43
Polkapenn	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	0.67
		Rock fragments	0.33		

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value
20MT2:					
Nunatak	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.08	Rock fragments	0.50
20MT3:					
Polkapenn	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	0.67
		Rock fragments	0.33		
Bearisland	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Rock fragments	0.50
Enigma	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	0.82	Rock fragments	0.84
		Rock fragments	0.71		
20MT4:					
Seclusion	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	0.50
Rock outcrop	25	Not rated		Not rated	
20MT5:					
Rock outcrop	35	Not rated		Not rated	
Seclusion	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	0.50
Skarn	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Rock fragments	0.40
20MT6:					
Bergbay	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	0.82	Rock fragments	1.00
		Rock fragments	0.54		
Boussole	25	Unsuited		Unsuited	
		Wetness	1.00	Slope	1.00
		Slope	1.00	Restrictive layer	1.00
		Restrictive layer	1.00		
Toyatte	20	Unsuited		Unsuited	
		Restrictive layer	1.00	Slope	1.00
		Wetness	1.00		
		Slope	1.00		
20MT7:					
Foad	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.56
		Restrictive layer	0.32		

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT7:					
Abdallah	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	1.00	Rock fragments	1.00
Justicecreek	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
20MTC:					
Skarn	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Rock fragments	0.40
Polkapenn	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	0.67
		Rock fragments	0.33		
Kadachan	20	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	1.00	Slope	1.00
20MTE:					
Wachusett	40	Unsuited		Unsuited	
		Wetness	1.00	Slope	1.00
		Slope	1.00		
		Restrictive layer	0.99		
Maquinna	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	0.32		
Boussole	20	Unsuited		Unsuited	
		Wetness	1.00	Restrictive layer	1.00
		Restrictive layer	1.00	Slope	0.72
		Slope	0.72		
20MTF:					
Wachusett	35	Unsuited		Unsuited	
		Wetness	1.00	Slope	1.00
		Slope	1.00		
		Restrictive layer	0.99		
Maquinna	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	0.32		
Enigma	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	0.82	Rock fragments	0.84
		Rock fragments	0.71		
20OC1:					
Scidmore	55	Well suited		Well suited	
Perouse, frequently ponded	35	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OD1:					
Gustavus	45	Well suited		Well suited	
Lamplugh	45	Moderately suited		Moderately suited	
		Wetness	0.25	Wetness	0.13
20ODF:					
Glacierbay	50	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
Geikie	30	Well suited		Well suited	
20OP1:					
Fossil	30	Well suited		Moderately suited	
				Rock fragments	0.15
Tyeen	25	Well suited		Moderately suited	
				Rock fragments	0.50
Vivid	20	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.75
				Rock fragments	0.33
20OP4:					
Kashoto	50	Well suited		Well suited	
Annoksek	30	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
Bulky	15	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
20OP5:					
Fossil	35	Well suited		Moderately suited	
				Rock fragments	0.15
Tyeen	25	Moderately suited		Moderately suited	
		Slope	0.43	Rock fragments	0.50
				Slope	0.43
Vivid	20	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.75
				Rock fragments	0.33
20OP6:					
Bulky	35	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
Bertha	30	Well suited		Well suited	
Icy	15	Well suited		Well suited	
20OPE:					
Tyeen	40	Well suited		Moderately suited	
				Rock fragments	0.50
Shagcove	30	Well suited		Moderately suited	
				Rock fragments	0.22

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OPE:					
Puffin	20	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
20OV1:					
Perouse, frequently ponded	60	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
Perouse	40	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
20OW1:					
Perouse	40	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
Gustavus	30	Well suited		Well suited	
Perouse, frequently ponded	20	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
20OWF:					
Fairweather	70	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
Icy	30	Well suited		Well suited	
20PL1:					
Tyeen	40	Well suited		Moderately suited	
				Rock fragments	0.50
Cenotaph	25	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.23
Fossil	20	Well suited		Moderately suited	
				Rock fragments	0.15
20PL2:					
Tyeen	35	Well suited		Moderately suited	
				Rock fragments	0.50
Fossil	30	Well suited		Moderately suited	
				Rock fragments	0.15
Fingers	15	Poorly suited		Moderately suited	
		Wetness	0.99	Rock fragments	0.50
20PL3:					
Kashoto	35	Well suited		Well suited	
Annoksek	25	Unsuited		Unsuited	
		Restrictive layer	1.00	Restrictive layer	1.00
Ancon	20	Poorly suited		Moderately suited	
		Wetness	0.96	Slope	0.43
		Slope	0.43		

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20PL6:					
Tidalwave	60	Well suited		Well suited	
Drybay	25	Well suited		Moderately suited Rock fragments	 0.50
Puffin	15	Unsuited Rock fragments	 1.00	Unsuited Rock fragments	 1.00
20PLD:					
Typic Cryaquents, sandy	55	Unsuited Wetness	 1.00	Moderately suited Wetness	 0.75
Typic Cryorthents, sandy, rarely flooded	30	Well suited		Well suited	
20RW2:					
Riverwash	60	Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Well suited		Well suited	
20SC:					
Beaches	60	Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Well suited		Well suited	
20TE2:					
Tidalwave	50	Well suited		Well suited	
Drybay	30	Well suited		Moderately suited Rock fragments	 0.50
20TF1:					
Water, saline	70	Not rated		Not rated	
Astrolable	15	Unsuited Wetness	 1.00	Moderately suited Wetness	 0.50
Murkbay	15	Well suited		Well suited	
20TF3:					
Water, saline	55	Not rated		Not rated	
Astrolable	20	Unsuited Wetness	 1.00	Moderately suited Wetness	 0.50
Beartrack	15	Unsuited Wetness	 1.00	Moderately suited Wetness	 0.50
20TH1:					
Ibach	40	Moderately suited Slope Rock fragments	 0.72 0.39	Unsuited Rock fragments Slope	 1.00 0.72

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20TH1:					
Lamplugh	30	Moderately suited		Moderately suited	
		Wetness	0.25	Wetness	0.13
Bartlettcove	20	Moderately suited		Moderately suited	
		Slope	0.43	Slope	0.43
20UL1:					
Urban land	90	Not rated		Not rated	
20UM1:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Rock fragments	0.50
20UM2:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Moderately suited		Moderately suited	
		Slope	0.72	Slope	0.72
				Rock fragments	0.50
20VBA:					
Typic Cryofluvents	50	Well suited		Well suited	
Aquic Dystrocryepts, silty	30	Poorly suited		Moderately suited	
		Wetness	0.97	Wetness	0.19
20WD1:					
Perouse	35	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
Scidmore	35	Well suited		Well suited	
Perouse, frequently ponded	20	Unsuited		Moderately suited	
		Wetness	1.00	Wetness	0.50
22HIA:					
Rock outcrop, rugged summit	80	Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Rock fragments	0.44
22SM1:					
Woodlake	60	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	1.00	Slope	1.00
		Restrictive layer	0.85		
Flapjack	30	Poorly suited		Unsuited	
		Wetness	0.99	Rock fragments	1.00
		Restrictive layer	0.88		

Table 7.—Land Management, Part III (Site Preparation)—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
BR:					
Rock outcrop	100	Not rated		Not rated	
GL2:					
Glaciers	95	Not rated		Not rated	
P:					
Pits	90	Not rated		Not rated	
RW:					
Riverwash	90	Not rated		Not rated	
SW:					
Water, saline	95	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	

Table 7.—Land Management, Part IV (Site Restoration)

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:					
Muirpoint	65	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
Puffin	15	High		Moderate	
		Texture/rock fragments	1.00	Available water	0.50
				Soil reaction	0.50
20AF2:					
Entisols, alluvial fans, occasionally flooded	90	Moderate		High	
		Texture/surface layer thickness/rock fragments	0.50	Wetness	1.00
20CL1:					
Strawberry	60	Low		Low	
Fingerock	20	High		Moderate	
		Texture/rock fragments	1.00	Soil reaction	0.50
				Available water	0.50
20CP1:					
Oberlin	55	Low		High	
				Wetness	1.00
Perouse, frequently ponded	25	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
Perouse	15	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
20CP2:					
Beaches	50	Not rated		Not rated	
Monashka	25	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
Murkbay	25	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20CPF:					
Icy	45	Low		High	
				Wetness	1.00
Excursion	40	Low		High	
				Wetness	1.00
20ED1:					
Gustavus	75	Low		Moderate	
				Soil reaction	0.50
Bartlettcove	20	High		Low	
		Texture/surface layer thickness/rock fragments	1.00		
20ED2:					
Beardslee	60	Low		Low	
Monashka	40	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
20FP1:					
Drybay	70	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Tidalwave	30	Low		Low	
20FP2:					
Bertha	55	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
Puffin	30	High		Moderate	
		Texture/rock fragments	1.00	Available water Soil reaction	0.50 0.50
20FP3:					
Tidalwave	60	Low		Low	
Ashmun, frequently ponded	25	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
Drybay	15	Low		Low	
		Texture/surface depth/rock fragments	0.10		

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
20FPL:					
Cryaquepts	40	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
Typic Cryaquents, gravelly, very poorly drained	30	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Wetness	1.00
Water	30	Not rated		Not rated	
20FPM:					
Typic Cryaquents, silty	85	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
20FPY:					
Oxyaquic Cryorthents, sandy or gravelly	60	Moderate		Low	
		Texture/surface layer thickness/rock fragments	0.50		
Typic Cryaquents, sandy or gravelly	25	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
20FPZ:					
Typic Cryorthents, gravelly	60	Low		Moderate	
		Texture/surface depth/rock fragments	0.10	Available water	0.50
Typic Cryofluvents	30	Low		Moderate	
		Texture/surface depth/rock fragments	0.10	Soil reaction	0.50
20GP1:					
Gustavus	35	Low		Moderate	
				Soil reaction	0.50
Ibach	35	Low		Moderate	
				Soil reaction	0.50
Scidmore	25	Low		Low	
		Texture/surface depth/rock fragments	0.10		

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HI1:					
Foad	65	Moderate		Moderate	
		Texture/slope/ surface depth/ rock fragments	0.50	Soil reaction	0.50
Boussole	20	Low		High	
		Texture/slope/ rock fragments	0.10	Wetness	1.00
				Soil reaction	0.50
20HI2:					
Kashoto	35	Low		High	
				Wetness	1.00
				Soil reaction	0.50
Foad	25	Moderate		Moderate	
		Texture/slope/ surface depth/ rock fragments	0.50	Soil reaction	0.50
Kutskloh	20	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
20HI3:					
Polkapenn	35	High		Moderate	
		Texture/slope/ rock fragments	1.00	Available water	0.50
Dagelet	25	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Available water	0.50
Nunatak	20	Moderate		Moderate	
		Texture/slope/ surface depth/ rock fragments	0.50	Available water	0.50
20HI5:					
Kaknau	45	Moderate		Moderate	
		Texture/slope/ surface depth/ rock fragments	0.50	Available water	0.50
Tricklake	35	Low		Low	
20HIB:					
Drybay	35	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Kaknau	30	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Available water	0.50
Vivid	25	Low		High	
				Wetness	1.00

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HID:					
Grandplateau	55	Low		High	
				Wetness	1.00
Crillon	35	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
20HIE:					
Kashoto	40	Low		High	
				Wetness	1.00
				Soil reaction	0.50
Kutskloh	30	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
Wachusett	20	Moderate		High	
		Texture/slope/ surface depth/ rock fragments	0.50	Wetness	1.00
				Soil reaction	0.50
				Available water	0.50
20HIF:					
Kashoto	45	Low		High	
				Wetness	1.00
				Soil reaction	0.50
Wachusett	35	Moderate		High	
		Texture/surface depth/rock fragments	0.50	Wetness	1.00
				Soil reaction	0.50
				Available water	0.50
20HIN:					
Polkapenn	40	High		Moderate	
		Texture/slope/ rock fragments	1.00	Available water	0.50
Nunatak	30	Moderate		Moderate	
		Texture/slope/ surface depth/ rock fragments	0.50	Available water	0.50
20HIS:					
Lithic Cryorthents, rugged summit	46	Moderate		High	
		Texture/slope/ surface depth/ rock fragments	0.50	Wetness	1.00
				Soil reaction	0.50
Typic Humicryepts, high elevation	44	Moderate		Moderate	
		Texture/slope/ rock fragments	0.50	Soil reaction	0.50

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20IS1:					
Cenotaph	35	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
Water, saline	35	Not rated		Not rated	
Beaches	20	Not rated		Not rated	
20LF1:					
Abyss	55	Low		High	
				Wetness	1.00
Astrolable	30	Low		High	
				Wetness	1.00
20MD1:					
Gustavus	70	Low		Moderate	
				Soil reaction	0.50
Perouse	20	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
20MF1:					
Geikie	55	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Gustavus	30	Low		Moderate	
				Soil reaction	0.50
Scidmore	15	Low		Low	
		Texture/surface depth/rock fragments	0.10		
20MF2:					
Gustavus	60	Low		Moderate	
				Soil reaction	0.50
Geikie	30	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
20MT1:					
Bearisland	35	High		High	
		Texture/rock fragments	1.00	Available water	1.00
Kadachan	30	High		High	
		Texture/slope/ rock fragments	1.00	Available water	1.00
Rubble land	25	Not rated		Not rated	

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Potential for damage to soil by fire: Value	Potential for seedling mortality: Rating class and limiting features	Potential for seedling mortality: Value
20MT2:					
Escures	25	High		Low	
		Texture/slope/ surface layer thickness	1.00		
Polkapenn	25	High		Moderate	
		Texture/slope/ rock fragments	1.00	Available water	0.50
Nunatak	20	Moderate		Moderate	
		Texture/slope/ surface depth/ rock fragments	0.50	Available water	0.50
20MT3:					
Polkapenn	30	High		Moderate	
		Texture/slope/ rock fragments	1.00	Available water	0.50
Bearisland	25	High		High	
		Texture/rock fragments	1.00	Available water	1.00
Enigma	20	High		High	
		Texture/slope/ surface depth/ rock fragments	1.00	Available water	1.00
				Soil reaction	0.50
20MT4:					
Seclusion	65	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Available water	0.50
Rock outcrop	25	Not rated		Not rated	
20MT5:					
Rock outcrop	35	Not rated		Not rated	
Seclusion	25	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Available water	0.50
Skarn	20	Moderate		Moderate	
		Texture/slope/ surface depth/ rock fragments	0.50	Available water	0.50
20MT6:					
Bergbay	30	Low		Moderate	
		Texture/rock fragments	0.10	Soil reaction	0.50
Boussole	25	Low		High	
		Texture/slope/ rock fragments	0.10	Wetness	1.00
				Soil reaction	0.50

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
20MT6:					
Toyatte	20	Low		High	
				Wetness	1.00
				Available water	0.50
20MT7:					
Foad	35	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
				Available water	0.50
Abdallah	25	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
Justicecreek	20	Low		Moderate	
				Available water	0.50
20MTC:					
Skarn	35	Moderate		Moderate	
		Texture/slope/ surface depth/ rock fragments	0.50	Available water	0.50
Polkapenn	25	High		Moderate	
		Texture/slope/ rock fragments	1.00	Available water	0.50
Kadachan	20	High		High	
		Texture/slope/ rock fragments	1.00	Available water	1.00
20MTE:					
Wachusett	40	Moderate		High	
		Texture/slope/ surface depth/ rock fragments	0.50	Wetness	1.00
				Soil reaction	0.50
				Available water	0.50
Maquinna	30	Low		High	
		Texture/rock fragments	0.10	Soil reaction	1.00
				Available water	0.50
Boussole	20	Low		High	
				Wetness	1.00
				Soil reaction	0.50
20MTF:					
Wachusett	35	Moderate		High	
		Texture/slope/ surface depth/ rock fragments	0.50	Wetness	1.00
				Soil reaction	0.50
				Available water	0.50
Maquinna	25	Low		High	
		Texture/rock fragments	0.10	Soil reaction	1.00
				Available water	0.50
Enigma	20	High		High	
		Texture/slope/ surface depth/ rock fragments	1.00	Available water	1.00
				Soil reaction	0.50

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OC1:					
Scidmore	55	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Perouse, frequently ponded	35	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
20OD1:					
Gustavus	45	Low		Moderate	
				Soil reaction	0.50
Lamplugh	45	Low		High	
				Wetness	1.00
				Soil reaction	1.00
20ODF:					
Glacierbay	50	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
Geikie	30	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
20OP1:					
Fossil	30	High		Low	
		Texture/rock fragments	1.00		
Tyeen	25	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Vivid	20	Low		High	
				Wetness	1.00
20OP4:					
Kashoto	50	Low		High	
				Wetness	1.00
				Soil reaction	0.50
Annoksek	30	Low		Low	
Bulky	15	Low		High	
				Wetness	1.00
				Soil reaction	0.50

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OP5:					
Fossil	35	High		Low	
		Texture/rock fragments	1.00		
Tyeen	25	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Available water	0.50
Vivid	20	Low		High	
				Wetness	1.00
20OP6:					
Bulky	35	Low		High	
				Wetness	1.00
				Soil reaction	0.50
Bertha	30	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
Icy	15	Low		High	
				Wetness	1.00
20OPE:					
Tyeen	40	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Shagcove	30	Low		Moderate	
		Texture/surface depth/rock fragments	0.10	Available water	0.50
Puffin	20	High		Moderate	
		Texture/rock fragments	1.00	Available water	0.50
				Soil reaction	0.50
20OV1:					
Perouse, frequently ponded	60	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
Perouse	40	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
20OW1:					
Perouse	40	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
Gustavus	30	Low		Moderate	
				Soil reaction	0.50

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OW1:					
Perouse, frequently ponded	20	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
20OWF:					
Fairweather	70	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
Icy	30	Low		High	
				Wetness	1.00
20PL1:					
Tyeen	40	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Cenotaph	25	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
Fossil	20	High		Low	
		Texture/rock fragments	1.00		
20PL2:					
Tyeen	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Fossil	30	High		Low	
		Texture/rock fragments	1.00		
Fingers	15	High		High	
		Texture/surface layer thickness/rock fragments	1.00	Wetness	1.00
				Available water	0.50
20PL3:					
Kashoto	35	Low		High	
				Wetness	1.00
				Soil reaction	0.50
Annoksek	25	Low		Low	
Ancon	20	Low		Moderate	
				Soil reaction	0.50
				Wetness	0.50

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20PL6:					
Tidalwave	60	Low		Low	
Drybay	25	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Puffin	15	High		Moderate	
		Texture/rock fragments	1.00	Available water	0.50
				Soil reaction	0.50
20PLD:					
Typic Cryaquents, sandy	55	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
				Soil reaction	0.50
Typic Cryorthents, sandy, rarely flooded	30	Moderate		Low	
		Texture/rock fragments	0.50		
20RW2:					
Riverwash	60	Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Moderate		Low	
		Texture/surface layer thickness/rock fragments	0.50		
20SC:					
Beaches	60	Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Moderate		Low	
		Texture/rock fragments	0.50		
20TE2:					
Tidalwave	50	Low		Low	
Drybay	30	Low		Low	
		Texture/surface depth/rock fragments	0.10		
20TF1:					
Water, saline	70	Not rated		Not rated	
Astrolable	15	Low		High	
				Wetness	1.00

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20TF1:					
Murkbay	15	High		Moderate	
		Texture/surface layer thickness/rock fragments	1.00	Available water	0.50
20TF3:					
Water, saline	55	Not rated		Not rated	
Astrolable	20	Low		High	
				Wetness	1.00
Beartrack	15	Low		High	
				Wetness	1.00
				Salinity	0.50
20TH1:					
Ibach	40	Low		Moderate	
				Soil reaction	0.50
Lamplugh	30	Low		High	
				Wetness	1.00
				Soil reaction	1.00
Bartlettcove	20	High		Low	
		Texture/surface layer thickness/rock fragments	1.00		
20UL1:					
Urban land	90	Not rated		Not rated	
20UM1:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	High		High	
		Texture/rock fragments	1.00	Available water	1.00
20UM2:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	High		High	
		Texture/rock fragments	1.00	Available water	1.00
20VBA:					
Typic Cryofluvents	50	Low		Moderate	
		Texture/surface depth/rock fragments	0.10	Soil reaction	0.50
Aquic Dystrocryepts, silty	30	Low		High	
				Wetness	1.00

Table 7.—Land Management, Part IV (Site Restoration)—Continued

Map unit symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20WD1:					
Perouse	35	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
Scidmore	35	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Perouse, frequently ponded	20	High		High	
		Texture/rock fragments	1.00	Wetness	1.00
22HIA:					
Rock outcrop, rugged summit	80	Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Moderate		High	
		Texture/slope/ surface depth/ rock fragments	0.50	Wetness	1.00
				Soil reaction	0.50
22SM1:					
Woodlake	60	Low		Moderate	
				Soil reaction	0.50
Flapjack	30	Low		High	
				Wetness	1.00
BR:					
Rock outcrop	100	Not rated		Not rated	
GL2:					
Glaciers	95	Not rated		Not rated	
P:					
Pits	90	Not rated		Not rated	
RW:					
Riverwash	90	Not rated		Not rated	
SW:					
Water, saline	95	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	

Table 8.—Recreational Development, Part I

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:					
Muirpoint	65	Somewhat limited		Somewhat limited	
		Gravel content	0.35	Gravel content	0.35
Puffin	15	Very limited		Very limited	
		Flooding	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00
		Large stones content	1.00	Too sandy	0.76
		Too sandy	0.76	Flooding	0.40
		Depth to saturated zone	0.05	Depth to saturated zone	0.02
20AF2:					
Entisols, alluvial fans, occasionally flooded	90	Very limited		Very limited	
		Flooding	1.00	Slope	1.00
		Slope	1.00	Too sandy	0.50
		Too sandy	0.50		
20CL1:					
Strawberry	60	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.93	Depth to saturated zone	0.64
Fingerock	20	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
20CP1:					
Oberlin	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
Perouse, frequently ponded	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
		Too sandy	1.00	Depth to saturated zone	1.00
Perouse	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00
		Too sandy	1.00	Depth to saturated zone	1.00
20CP2:					
Beaches	50	Not rated		Not rated	
Monashka	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
		Too sandy	1.00	Depth to saturated zone	1.00

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20CP2:					
Murkbay	25	Somewhat limited Too sandy	 0.13	Somewhat limited Too sandy	 0.13
20CPF:					
Icy	45	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Excursion	40	Very limited Depth to saturated zone Ponding Organic matter content	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Organic matter content	 1.00 1.00 1.00
20ED1:					
Gustavus	75	Very limited Slope Too sandy	 1.00 0.08	Very limited Slope Too sandy	 1.00 0.08
Bartlettcove	20	Very limited Slope Too sandy	 1.00 0.88	Very limited Slope Too sandy	 1.00 0.88
20ED2:					
Beardslee	60	Not limited		Not limited	
Monashka	40	Very limited Depth to saturated zone Ponding Too sandy	 1.00 1.00 1.00	Very limited Too sandy Ponding Depth to saturated zone	 1.00 1.00 1.00
20FP1:					
Drybay	70	Not limited		Not limited	
Tidalwave	30	Not limited		Not limited	
20FP2:					
Bertha	55	Very limited Flooding Too sandy	 1.00 1.00	Very limited Too sandy	 1.00
Puffin	30	Very limited Flooding Gravel content Large stones content Too sandy Depth to saturated zone	 1.00 1.00 1.00 0.76 0.05	Very limited Large stones content Gravel content Too sandy Flooding Depth to saturated zone	 1.00 1.00 0.76 0.40 0.02

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20FP3:					
Tidalwave	60	Not limited		Not limited	
Ashmun, frequently ponded	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
		Too sandy	1.00	Depth to saturated zone	1.00
Drybay	15	Not limited		Not limited	
20FPL:					
Cryaquepts	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Gravel content	0.75
		Gravel content	0.75	Flooding	0.40
Typic Cryaquents, gravelly, very poorly drained	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Gravel content	0.79
		Gravel content	0.79	Flooding	0.40
Water	30	Not rated		Not rated	
20FPM:					
Typic Cryaquents, silty	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00		
20FPY:					
Oxyaquic Cryorthents, sandy or gravelly	60	Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00
		Too sandy	1.00	Gravel content	0.54
		Gravel content	0.54		
Typic Cryaquents, sandy or gravelly	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00		
20FPZ:					
Typic Cryorthents, gravelly	60	Very limited		Somewhat limited	
		Flooding	1.00	Gravel content	0.88
		Gravel content	0.88		
Typic Cryofluvents	30	Very limited		Not limited	
		Flooding	1.00		

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20GP1:					
Gustavus	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.08	Too sandy	0.08
Ibach	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.18	Large stones content	0.18
		Slow water movement	0.04	Slow water movement	0.04
Scidmore	25	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.91	Depth to saturated zone	0.60
20HI1:					
Foad	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.74	Large stones content	0.74
Boussole	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Organic matter content	1.00
		Organic matter content	1.00	Depth to saturated zone	0.88
20HI2:					
Kashoto	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
Foad	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.74	Large stones content	0.74
Kutskloh	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Gravel content	0.05	Gravel content	0.05
20HI3:					
Polkapenn	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.58	Large stones content	0.58
		Too sandy	0.18	Too sandy	0.18
Dagelet	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HI3:					
Nunatak	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Gravel content	0.10	Gravel content	0.10
20HI5:					
Kaknau	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
Tricklake	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
20HIB:					
Drybay	35	Not limited		Not limited	
Kaknau	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
Vivid	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
20HID:					
Grandplateau	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
Crillon	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to saturated zone	0.91	Depth to saturated zone	0.60
20HIE:					
Kashoto	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
Kutskloh	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00
		Gravel content	0.05	Gravel content	0.05
Wachusett	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Organic matter content	1.00	Organic matter content	1.00
		Depth to saturated zone	0.44	Depth to saturated zone	0.22

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HIF:					
Kashoto	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
Wachusett	35	Very limited		Very limited	
		Organic matter content	1.00	Organic matter content	1.00
		Slope	1.00	Slope	1.00
		Depth to saturated zone	0.44	Depth to saturated zone	0.22
20HIN:					
Polkapenn	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.58	Large stones content	0.58
		Too sandy	0.18	Too sandy	0.18
Nunatak	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Gravel content	0.10	Gravel content	0.10
20HIS:					
Lithic Cryorthents, rugged summit	46	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to saturated zone	0.99
		Gravel content	0.75	Gravel content	0.75
Typic Humicryepts, high elevation	44	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	0.99	Gravel content	0.99
		Depth to saturated zone	0.07	Depth to saturated zone	0.04
20IS1:					
Cenotaph	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Gravel content	0.14	Gravel content	0.14
Water, saline	35	Not rated		Not rated	
Beaches	20	Not rated		Not rated	
20LF1:					
Abyss	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00		

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20LF1:					
Astrolable	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.60
		Slow water movement	0.15	Slow water movement	0.15
20MD1:					
Gustavus	70	Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16
		Too sandy	0.08	Too sandy	0.08
Perouse	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00
		Too sandy	1.00	Depth to saturated zone	1.00
20MF1:					
Geikie	55	Not limited		Not limited	
Gustavus	30	Somewhat limited		Somewhat limited	
		Too sandy	0.08	Too sandy	0.08
Scidmore	15	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.91	Depth to saturated zone	0.60
20MF2:					
Gustavus	60	Somewhat limited		Somewhat limited	
		Too sandy	0.08	Too sandy	0.08
Geikie	30	Not limited		Not limited	
20MT1:					
Bearisland	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00
		Too sandy	0.68	Too sandy	0.68
Kadachan	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.98	Too sandy	0.98
		Depth to saturated zone	0.20	Depth to saturated zone	0.10
Rubble land	25	Not rated		Not rated	
20MT2:					
Escures	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	0.05	Gravel content	0.05
Polkapenn	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.58	Large stones content	0.58
		Too sandy	0.18	Too sandy	0.18

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT2:					
Nunatak	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
		Gravel content	0.10	Gravel content	0.10
20MT3:					
Polkapenn	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.58	Large stones content	0.58
		Too sandy	0.18	Too sandy	0.18
Bearisland	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00
		Too sandy	0.68	Too sandy	0.68
Enigma	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.14	Large stones content	0.14
		Gravel content	0.01	Gravel content	0.01
20MT4:					
Seclusion	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.78	Gravel content	0.78
		Large stones content	0.76	Large stones content	0.76
Rock outcrop	25	Not rated		Not rated	
20MT5:					
Rock outcrop	35	Not rated		Not rated	
Seclusion	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.78	Gravel content	0.78
		Large stones content	0.76	Large stones content	0.76
Skarn	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	0.92	Gravel content	0.92
		Slow water movement	0.15	Slow water movement	0.15
20MT6:					
Bergbay	30	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT6:					
Boussole	25	Very limited Depth to saturated zone Slope Organic matter content	 1.00 1.00 1.00	Very limited Slope Organic matter content Depth to saturated zone	 1.00 1.00 0.88
Toyatte	20	Very limited Depth to saturated zone Slope Organic matter content Depth to bedrock	 1.00 1.00 1.00 1.00	Very limited Slope Organic matter content Depth to bedrock Depth to saturated zone	 1.00 1.00 1.00 0.99
20MT7:					
Foad	35	Very limited Slope Large stones content	 1.00 0.74	Very limited Slope Large stones content	 1.00 0.74
Abdallah	25	Very limited Slope Large stones content	 1.00 1.00	Very limited Large stones content Slope	 1.00 1.00
Justicecreek	20	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00
20MTC:					
Skarn	35	Very limited Slope Gravel content Slow water movement	 1.00 0.92 0.15	Very limited Slope Gravel content Slow water movement	 1.00 0.92 0.15
Polkapenn	25	Very limited Slope Depth to bedrock Large stones content Too sandy	 1.00 1.00 0.58 0.18	Very limited Slope Depth to bedrock Large stones content Too sandy	 1.00 1.00 0.58 0.18
Kadachan	20	Very limited Slope Too sandy Depth to saturated zone	 1.00 0.98 0.20	Very limited Slope Too sandy Depth to saturated zone	 1.00 0.98 0.10
20MTE:					
Wachusett	40	Very limited Slope Organic matter content Depth to saturated zone	 1.00 1.00 0.44	Very limited Slope Organic matter content Depth to saturated zone	 1.00 1.00 0.22

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MTE:					
Maquinna	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Organic matter content	1.00	Organic matter content	1.00
		Gravel content	0.88	Gravel content	0.88
Boussole	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Organic matter content	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	0.88
20MTF:					
Wachusett	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Organic matter content	1.00	Organic matter content	1.00
		Depth to saturated zone	0.44	Depth to saturated zone	0.22
Maquinna	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Organic matter content	1.00	Organic matter content	1.00
		Gravel content	0.88	Gravel content	0.88
Enigma	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.14	Large stones content	0.14
		Gravel content	0.01	Gravel content	0.01
20OC1:					
Scidmore	55	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.91	Depth to saturated zone	0.60
Perouse, frequently ponded	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
		Too sandy	1.00	Depth to saturated zone	1.00
20OD1:					
Gustavus	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.08	Too sandy	0.08
Lamplugh	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.15	Slow water movement	0.15

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20ODF:					
Glacierbay	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Slow water movement	0.04	Slow water movement	0.04
Geikie	30	Not limited		Not limited	
20OP1:					
Fossil	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Tyeen	25	Somewhat limited		Somewhat limited	
		Gravel content	0.91	Gravel content	0.91
		Slope	0.16	Slope	0.16
Vivid	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
20OP4:					
Kashoto	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
Annoksek	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
Bulky	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
20OP5:					
Fossil	35	Very limited		Very limited	
		Slope	1.00	Too sandy	1.00
		Too sandy	1.00	Slope	1.00
Tyeen	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	0.91	Gravel content	0.91
Vivid	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
20OP6:					
Bulky	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OP6:					
Bertha	30	Very limited Flooding Too sandy	 1.00 1.00	Very limited Too sandy	 1.00
Icy	15	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
20OPE:					
Tyeen	40	Somewhat limited Gravel content	 0.91	Somewhat limited Gravel content	 0.91
Shagcove	30	Somewhat limited Depth to saturated zone	 0.93	Somewhat limited Depth to saturated zone	 0.64
Puffin	20	Very limited Flooding Gravel content Large stones content Too sandy Depth to saturated zone	 1.00 1.00 1.00 0.76 0.05	Very limited Large stones content Gravel content Too sandy Flooding Depth to saturated zone	 1.00 1.00 0.76 0.40 0.02
20OV1:					
Perouse, frequently ponded	60	Very limited Depth to saturated zone Ponding Too sandy	 1.00 1.00 1.00	Very limited Too sandy Ponding Depth to saturated zone	 1.00 1.00 1.00
Perouse	40	Very limited Depth to saturated zone Too sandy	 1.00 1.00	Very limited Too sandy Depth to saturated zone	 1.00 1.00
20OW1:					
Perouse	40	Very limited Depth to saturated zone Too sandy	 1.00 1.00	Very limited Too sandy Depth to saturated zone	 1.00 1.00
Gustavus	30	Somewhat limited Too sandy	 0.08	Somewhat limited Too sandy	 0.08
Perouse, frequently ponded	20	Very limited Depth to saturated zone Ponding Too sandy	 1.00 1.00 1.00	Very limited Too sandy Ponding Depth to saturated zone	 1.00 1.00 1.00

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OWF:					
Fairweather	70	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Slow water movement	0.04	Slow water movement	0.04
Icy	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
20PL1:					
Tyeen	40	Somewhat limited		Somewhat limited	
		Gravel content	0.91	Gravel content	0.91
		Slope	0.16	Slope	0.16
Cenotaph	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Gravel content	0.14	Gravel content	0.14
Fossil	20	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
20PL2:					
Tyeen	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	0.91	Gravel content	0.91
Fossil	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Fingers	15	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Gravel content	0.95
		Gravel content	0.95	Depth to saturated zone	0.83
		Too sandy	0.76	Too sandy	0.76
20PL3:					
Kashoto	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
Annoksek	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.16	Slope	0.16
Ancon	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to saturated zone	0.81	Depth to saturated zone	0.48
20PL6:					
Tidalwave	60	Not limited		Not limited	
Drybay	25	Not limited		Not limited	

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20PL6:					
Puffin	15	Very limited		Very limited	
		Flooding	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00
		Large stones content	1.00	Too sandy	0.76
		Too sandy	0.76	Flooding	0.40
		Depth to saturated zone	0.05	Depth to saturated zone	0.02
20PLD:					
Typic Cryaquents, sandy	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Ponding	1.00		
Typic Cryorthents, sandy, rarely flooded	30	Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00
		Too sandy	1.00		
20RW2:					
Riverwash	60	Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00
		Too sandy	1.00	Gravel content	0.54
		Gravel content	0.54		
20SC:					
Beaches	60	Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00
		Too sandy	1.00		
20TE2:					
Tidalwave	50	Not limited		Not limited	
Drybay	30	Not limited		Not limited	
20TF1:					
Water, saline	70	Not rated		Not rated	
Astrolable	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.60
		Slow water movement	0.15	Slow water movement	0.15
Murkbay	15	Somewhat limited		Somewhat limited	
		Too sandy	0.13	Too sandy	0.13

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20TF3:					
Water, saline	55	Not rated		Not rated	
Astrolable	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.60
		Slow water movement	0.15	Slow water movement	0.15
Beartrack	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40
20TH1:					
Ibach	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.18	Large stones content	0.18
		Slow water movement	0.04	Slow water movement	0.04
Lamplugh	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.15	Slow water movement	0.15
Bartlettcove	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.88	Too sandy	0.88
20UL1:					
Urban land	90	Not rated		Not rated	
20UM1:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00
		Too sandy	0.68	Too sandy	0.68
20UM2:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00
		Too sandy	0.68	Too sandy	0.68
20VBA:					
Typic Cryofluvents	50	Very limited		Not limited	
		Flooding	1.00		

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20VBA:					
Aquic Dystrocryepts, silty	30	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	0.71
		Depth to saturated zone	0.97		
20WD1:					
Perouse	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00
		Too sandy	1.00	Depth to saturated zone	1.00
Scidmore	35	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.91	Depth to saturated zone	0.60
Perouse, frequently ponded	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
		Too sandy	1.00	Depth to saturated zone	1.00
22HIA:					
Rock outcrop, rugged summit	80	Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to saturated zone	0.99
		Gravel content	0.75	Gravel content	0.75
22SM1:					
Woodlake	60	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00
Flapjack	30	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Large stones content	0.92
		Large stones content	0.92	Depth to saturated zone	0.78
BR:					
Rock outcrop	100	Not rated		Not rated	
GL2:					
Glaciers	95	Not rated		Not rated	
P:					
Pits	90	Not rated		Not rated	

Table 8.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas	
		Rating class and limiting features	Value	Rating class and limiting features	Value
RW:					
Riverwash	90	Not rated		Not rated	
SW:					
Water, saline	95	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	

Table 8.—Recreational Development, Part II

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:					
Muirpoint	65	Not limited		Not limited	
Puffin	15	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00
		Too sandy	0.76	Too sandy	0.76
		Flooding	0.40	Flooding	0.40
20AF2:					
Entisols, alluvial fans, occasionally flooded	90	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Too sandy	0.50	Too sandy	0.50
		Slope	0.18		
20CL1:					
Strawberry	60	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.27	Depth to saturated zone	0.27
Fingerock	20	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
20CP1:					
Oberlin	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
Perouse, frequently ponded	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
Perouse	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
20CP2:					
Beaches	50	Not rated		Not rated	
Monashka	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20CP2:					
Murkbay	25	Somewhat limited		Somewhat limited	
		Too sandy	0.13	Too sandy	0.13
20CPF:					
Icy	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
Excursion	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
		Ponding	1.00	Ponding	1.00
20ED1:					
Gustavus	75	Somewhat limited		Somewhat limited	
		Too sandy	0.08	Too sandy	0.08
Bartlettcove	20	Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88
20ED2:					
Beardslee	60	Not limited		Not limited	
Monashka	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
20FP1:					
Drybay	70	Not limited		Not limited	
Tidalwave	30	Not limited		Not limited	
20FP2:					
Bertha	55	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Puffin	30	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00
		Too sandy	0.76	Too sandy	0.76
		Flooding	0.40	Flooding	0.40
20FP3:					
Tidalwave	60	Not limited		Not limited	
Ashmun, frequently ponded	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
Drybay	15	Not limited		Not limited	

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20FPL:					
Cryaquepts	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
Typic Cryaquents, gravelly, very poorly drained	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Flooding	0.40	Flooding	0.40
Water	30	Not rated		Not rated	
20FPM:					
Typic Cryaquents, silty	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
20FPY:					
Oxyaquic Cryorthents, sandy or gravelly	60	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Typic Cryaquents, sandy or gravelly	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
20FPZ:					
Typic Cryorthents, gravelly	60	Not limited		Not limited	
Typic Cryofluvents	30	Not limited		Not limited	
20GP1:					
Gustavus	35	Somewhat limited		Somewhat limited	
		Slope	0.50	Too sandy	0.08
		Too sandy	0.08		
Ibach	35	Somewhat limited		Somewhat limited	
		Slope	0.50	Large stones content	0.18
		Large stones content	0.18		
Scidmore	25	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.22	Depth to saturated zone	0.22
20HI1:					
Foad	65	Very limited		Somewhat limited	
		Slope	1.00	Large stones content	0.74
		Large stones content	0.74	Slope	0.22

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HI1:					
Boussole	20	Very limited		Very limited	
		Slope	1.00	Organic matter content	1.00
		Organic matter content	1.00	Water erosion	1.00
		Water erosion	1.00	Slope	1.00
		Depth to saturated zone	0.73	Depth to saturated zone	0.73
20HI2:					
Kashoto	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
Foad	25	Very limited		Somewhat limited	
		Slope	1.00	Slope	0.78
		Large stones content	0.74	Large stones content	0.74
Kutskloh	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.50		
20HI3:					
Polkapenn	35	Very limited		Somewhat limited	
		Slope	1.00	Slope	0.78
		Large stones content	0.58	Large stones content	0.58
		Too sandy	0.18	Too sandy	0.18
Dagelet	25	Very limited		Not limited	
		Slope	1.00		
Nunatak	20	Very limited		Very limited	
		Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	0.78
20HI5:					
Kaknau	45	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Slope	1.00	Slope	0.78
Tricklake	35	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Slope	1.00	Slope	1.00
20HIB:					
Drybay	35	Not limited		Not limited	
Kaknau	30	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Slope	0.50		

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HIB:					
Vivid	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
20HID:					
Grandplateau	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Water erosion	1.00
		Water erosion	1.00	Slope	1.00
Crillon	35	Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00
		Slope	1.00	Slope	0.22
		Depth to saturated zone	0.22	Depth to saturated zone	0.22
20HIE:					
Kashoto	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
Kutskloh	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
Wachusett	20	Very limited		Very limited	
		Organic matter content	1.00	Organic matter content	1.00
		Water erosion	1.00	Water erosion	1.00
		Slope	1.00	Slope	0.22
20HIF:					
Kashoto	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
Wachusett	35	Very limited		Very limited	
		Organic matter content	1.00	Organic matter content	1.00
		Water erosion	1.00	Water erosion	1.00
		Slope	0.50		
20HIN:					
Polkapenn	40	Very limited		Somewhat limited	
		Slope	1.00	Slope	0.78
		Large stones content	0.58	Large stones content	0.58
		Too sandy	0.18	Too sandy	0.18
Nunatak	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HIS:					
Lithic Cryorthents, rugged summit	46	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
Typic Humicryepts, high elevation	44	Very limited		Very limited	
		Slope	1.00	Slope	1.00
20IS1:					
Cenotaph	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
Water, saline	35	Not rated		Not rated	
Beaches	20	Not rated		Not rated	
20LF1:					
Abyss	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
Astrolable	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.60	Flooding	0.60
20MD1:					
Gustavus	70	Somewhat limited		Somewhat limited	
		Too sandy	0.08	Too sandy	0.08
Perouse	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
20MF1:					
Geikie	55	Not limited		Not limited	
Gustavus	30	Somewhat limited		Somewhat limited	
		Too sandy	0.08	Too sandy	0.08
Scidmore	15	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.22	Depth to saturated zone	0.22
20MF2:					
Gustavus	60	Somewhat limited		Somewhat limited	
		Too sandy	0.08	Too sandy	0.08
Geikie	30	Not limited		Not limited	
20MT1:					
Bearisland	35	Very limited		Somewhat limited	
		Slope	1.00	Slope	0.78
		Too sandy	0.68	Too sandy	0.68

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT1:					
Kadachan	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.98	Too sandy	0.98
Rubble land	25	Not rated		Not rated	
20MT2:					
Escures	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
Polkapenn	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.58	Large stones content	0.58
		Too sandy	0.18	Too sandy	0.18
Nunatak	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00
20MT3:					
Polkapenn	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.58	Large stones content	0.58
		Too sandy	0.18	Too sandy	0.18
Bearisland	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.68	Too sandy	0.68
Enigma	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.14	Large stones content	0.14
20MT4:					
Seclusion	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76
Rock outcrop	25	Not rated		Not rated	
20MT5:					
Rock outcrop	35	Not rated		Not rated	
Seclusion	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76
Skarn	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT6:					
Bergbay	30	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
Boussole	25	Very limited		Very limited	
		Slope	1.00	Organic matter content	1.00
		Organic matter content	1.00	Water erosion	1.00
		Water erosion	1.00	Slope	1.00
		Depth to saturated zone	0.73	Depth to saturated zone	0.73
Toyatte	20	Very limited		Very limited	
		Slope	1.00	Organic matter content	1.00
		Organic matter content	1.00	Water erosion	1.00
		Water erosion	1.00	Depth to saturated zone	0.99
		Depth to saturated zone	0.99	Slope	0.78
20MT7:					
Foad	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.74	Large stones content	0.74
Abdallah	25	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00
Justicecreek	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
20MTC:					
Skarn	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
Polkapenn	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.58	Large stones content	0.58
		Too sandy	0.18	Too sandy	0.18
Kadachan	20	Very limited		Somewhat limited	
		Slope	1.00	Too sandy	0.98
		Too sandy	0.98	Slope	0.78
20MTE:					
Wachusett	40	Very limited		Very limited	
		Organic matter content	1.00	Organic matter content	1.00
		Water erosion	1.00	Water erosion	1.00
		Slope	1.00	Slope	1.00

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MTE:					
Maquinna	30	Very limited Organic matter content Slope	 1.00 1.00	Very limited Organic matter content Slope	 1.00 1.00
Boussole	20	Very limited Organic matter content Water erosion Slope Depth to saturated zone	 1.00 1.00 1.00 0.73	Very limited Organic matter content Water erosion Depth to saturated zone	 1.00 1.00 0.73
20MTF:					
Wachusett	35	Very limited Slope Organic matter content Water erosion	 1.00 1.00 1.00	Very limited Organic matter content Water erosion Slope	 1.00 1.00 1.00
Maquinna	25	Very limited Slope Organic matter content	 1.00 1.00	Very limited Organic matter content Slope	 1.00 1.00
Enigma	20	Very limited Slope Large stones content	 1.00 0.14	Very limited Slope Large stones content	 1.00 0.14
20OC1:					
Scidmore	55	Somewhat limited Depth to saturated zone	 0.22	Somewhat limited Depth to saturated zone	 0.22
Perouse, frequently ponded	35	Very limited Depth to saturated zone Too sandy Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Ponding	 1.00 1.00 1.00
20OD1:					
Gustavus	45	Somewhat limited Too sandy	 0.08	Somewhat limited Too sandy	 0.08
Lamplugh	45	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00
20ODF:					
Glacierbay	50	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00
Geikie	30	Not limited		Not limited	

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OP1:					
Fossil	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Tyeen	25	Not limited		Not limited	
Vivid	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
20OP4:					
Kashoto	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00
Annoksek	30	Not limited		Not limited	
Bulky	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
20OP5:					
Fossil	35	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Tyeen	25	Somewhat limited		Not limited	
		Slope	0.50		
Vivid	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Water erosion	1.00	Water erosion	1.00
20OP6:					
Bulky	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
Bertha	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
Icy	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
20OPE:					
Tyeen	40	Not limited		Not limited	
Shagcove	30	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.27	Depth to saturated zone	0.27

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OPE:					
Puffin	20	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00
		Too sandy	0.76	Too sandy	0.76
		Flooding	0.40	Flooding	0.40
20OV1:					
Perouse, frequently ponded	60	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
Perouse	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
20OW1:					
Perouse	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
Gustavus	30	Somewhat limited		Somewhat limited	
		Too sandy	0.08	Too sandy	0.08
Perouse, frequently ponded	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
20OWF:					
Fairweather	70	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
Icy	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
20PL1:					
Tyeen	40	Not limited		Not limited	
Cenotaph	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
Fossil	20	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20PL2:					
Tyeen	35	Not limited		Not limited	
Fossil	30	Very limited Too sandy	 1.00	Very limited Too sandy	 1.00
Fingers	15	Somewhat limited Too sandy Depth to saturated zone	 0.76 0.62	Somewhat limited Too sandy Depth to saturated zone	 0.76 0.62
20PL3:					
Kashoto	35	Very limited Depth to saturated zone Organic matter content	 1.00 1.00	Very limited Depth to saturated zone Organic matter content	 1.00 1.00
Annoksek	25	Not limited		Not limited	
Ancon	20	Somewhat limited Slope Depth to saturated zone	 0.50 0.11	Somewhat limited Depth to saturated zone	 0.11
20PL6:					
Tidalwave	60	Not limited		Not limited	
Drybay	25	Not limited		Not limited	
Puffin	15	Very limited Large stones content Gravel content Too sandy Flooding	 1.00 1.00 0.76 0.40	Very limited Large stones content Gravel content Too sandy Flooding	 1.00 1.00 0.76 0.40
20PLD:					
Typic Cryaquents, sandy	55	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00
Typic Cryorthents, sandy, rarely flooded	30	Very limited Too sandy	 1.00	Very limited Too sandy	 1.00
20RW2:					
Riverwash	60	Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Very limited Too sandy	 1.00	Very limited Too sandy	 1.00

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20SC:					
Beaches	60	Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
20TE2:					
Tidalwave	50	Not limited		Not limited	
Drybay	30	Not limited		Not limited	
20TF1:					
Water, saline	70	Not rated		Not rated	
Astrolable	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.60	Flooding	0.60
Murkbay	15	Somewhat limited		Somewhat limited	
		Too sandy	0.13	Too sandy	0.13
20TF3:					
Water, saline	55	Not rated		Not rated	
Astrolable	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.60	Flooding	0.60
Beartrack	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
20TH1:					
Ibach	40	Very limited		Somewhat limited	
		Slope	1.00	Large stones content	0.18
		Large stones content	0.18		
Lamplugh	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
Bartlettcove	20	Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88
		Slope	0.50		
20UL1:					
Urban land	90	Not rated		Not rated	
20UM1:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too sandy	0.68	Too sandy	0.68

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20UM2:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Very limited		Somewhat limited	
		Slope	1.00	Too sandy	0.68
		Too sandy	0.68		
20VBA:					
Typic Cryofluvents	50	Not limited		Not limited	
Aquic Dystrocryepts, silty	30	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	0.38	Depth to saturated zone	0.38
20WD1:					
Perouse	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
Scidmore	35	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.22	Depth to saturated zone	0.22
Perouse, frequently ponded	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00
		Ponding	1.00	Ponding	1.00
22HIA:					
Rock outcrop, rugged summit	80	Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
22SM1:					
Woodlake	60	Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	0.78
Flapjack	30	Somewhat limited		Somewhat limited	
		Large stones content	0.92	Large stones content	0.92
		Depth to saturated zone	0.50	Depth to saturated zone	0.50
BR:					
Rock outcrop	100	Not rated		Not rated	

Table 8.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Foot traffic and equestrian trails		Mountain bike and off-road vehicle trails	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GL2:					
Glaciers	95	Not rated		Not rated	
P:					
Pits	90	Not rated		Not rated	
RW:					
Riverwash	90	Not rated		Not rated	
SW:					
Water, saline	95	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	

Table 9.—Dwellings and Small Commercial Buildings

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:							
Muirpoint	65	Not limited		Not limited		Very limited Slope	 1.00
Puffin	15	Very limited Flooding Depth to saturated zone	 1.00 0.05	Very limited Flooding Depth to saturated zone	 1.00 1.00	Very limited Flooding Slope Depth to saturated zone	 1.00 0.14 0.05
20AF2:							
Entisols, alluvial fans, occasionally flooded	90	Very limited Flooding Slope	 1.00 1.00	Very limited Flooding Slope Depth to saturated zone	 1.00 1.00 0.95	Very limited Flooding Slope	 1.00 1.00
20CL1:							
Strawberry	60	Somewhat limited Depth to saturated zone	 0.93	Very limited Depth to saturated zone	 1.00	Somewhat limited Depth to saturated zone	 0.93
Fingerock	20	Not limited		Somewhat limited Depth to saturated zone	 0.96	Not limited	
20CP1:							
Oberlin	55	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00
Perouse, frequently ponded	25	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Perouse	15	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00
20CP2:							
Beaches	50	Not rated		Not rated		Not rated	
Monashka	25	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Murkbay	25	Not limited		Not limited		Not limited	

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20CPF:							
Icy	45	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Excursion	40	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20ED1:							
Gustavus	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Bartlettcove	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
20ED2:							
Beardslee	60	Not limited		Not limited		Somewhat limited	
						Slope	0.14
Monashka	40	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20FP1:							
Drybay	70	Not limited		Not limited		Somewhat limited	
						Slope	0.14
Tidalwave	30	Not limited		Very limited		Not limited	
				Depth to saturated zone	1.00		
20FP2:							
Bertha	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
						Slope	0.14
Puffin	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.05	Depth to saturated zone	1.00	Depth to saturated zone	0.05
20FP3:							
Tidalwave	60	Not limited		Very limited		Not limited	
				Depth to saturated zone	1.00		
Ashmun, frequently ponded	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Drybay	15	Not limited		Not limited		Not limited	

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20FPL:							
Cryaquepts	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Typic Cryaquents, gravelly, very poorly drained	30	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Water	30	Not rated		Not rated		Not rated	
20FPM:							
Typic Cryaquents, silty	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20FPY:							
Oxyaquic Cryorthents, sandy or gravelly	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.91		
Typic Cryaquents, sandy or gravelly	25	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20FPZ:							
Typic Cryorthents, gravelly	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Typic Cryofluvents	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
20GP1:							
Gustavus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Ibach	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.52	Large stones	0.52	Large stones	0.52
Scidmore	25	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.91	Depth to saturated zone	1.00	Depth to saturated zone	0.91

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HI1:							
Foad	65	Very limited Slope Large stones Depth to hard bedrock	 1.00 1.00 0.54	Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 1.00	Very limited Slope Large stones Depth to hard bedrock	 1.00 1.00 0.54
Boussole	20	Very limited Slope Depth to saturated zone Depth to hard bedrock	 1.00 1.00 1.00	Very limited Slope Depth to saturated zone Depth to hard bedrock	 1.00 1.00 1.00	Very limited Slope Depth to saturated zone Depth to hard bedrock	 1.00 1.00 1.00
20HI2:							
Kashoto	35	Very limited Subsidence Depth to saturated zone Organic matter content	 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Organic matter content	 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Organic matter content Slope	 1.00 1.00 1.00 0.14
Foad	25	Very limited Large stones Slope Depth to hard bedrock	 1.00 1.00 0.54	Very limited Depth to hard bedrock Large stones Slope	 1.00 1.00 1.00	Very limited Slope Large stones Depth to hard bedrock	 1.00 1.00 0.54
Kutskloh	20	Very limited Slope Depth to saturated zone Large stones	 1.00 1.00 1.00	Very limited Slope Depth to saturated zone Large stones	 1.00 1.00 1.00	Very limited Slope Depth to saturated zone Large stones	 1.00 1.00 1.00
20HI3:							
Polkapenn	35	Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 0.23	Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 0.23	Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 0.23
Dagelet	25	Very limited Slope Depth to hard bedrock	 1.00 0.96	Very limited Slope Depth to hard bedrock	 1.00 1.00	Very limited Slope Depth to hard bedrock	 1.00 0.96
Nunatak	20	Very limited Slope	 1.00	Very limited Slope Depth to hard bedrock	 1.00 0.92	Very limited Slope	 1.00
20HI5:							
Kaknau	45	Very limited Slope	 1.00	Very limited Slope Depth to soft bedrock	 1.00 0.23	Very limited Slope	 1.00
Tricklake	35	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HIB:							
Drybay	35	Not limited		Not limited		Very limited	
						Slope	1.00
Kaknau	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.23		
Vivid	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Large stones	0.03	Large stones	0.03	Slope	0.14
						Large stones	0.03
20HID:							
Grandplateau	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Depth to hard bedrock	0.38		
Crillon	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.91	Depth to hard bedrock	1.00	Depth to saturated zone	0.91
		Depth to hard bedrock	0.32	Slope	1.00	Depth to hard bedrock	0.32
				Depth to soft bedrock	0.92		
20HIE:							
Kashoto	40	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
						Slope	0.14
Kutskloh	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Large stones	1.00	Large stones	1.00	Large stones	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Wachusett	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Subsidence	1.00	Depth to saturated zone	1.00	Subsidence	1.00
		Depth to hard bedrock	0.99	Depth to hard bedrock	1.00	Depth to hard bedrock	0.99
		Depth to saturated zone	0.44	Subsidence	1.00	Depth to saturated zone	0.44

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HIF:							
Kashoto	45	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
						Slope	0.14
Wachusett	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Subsidence	1.00	Depth to hard bedrock	1.00	Subsidence	1.00
		Depth to hard bedrock	0.99	Slope	1.00	Depth to hard bedrock	0.99
		Depth to saturated zone	0.44	Subsidence	1.00	Depth to saturated zone	0.44
20HIN:							
Polkapenn	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.23	Large stones	0.23	Large stones	0.23
Nunatak	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.92		
20HIS:							
Lithic Cryorthents, rugged summit	46	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Typic Humicryepts, high elevation	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
20IS1:							
Cenotaph	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Water, saline	35	Not rated		Not rated		Not rated	
Beaches	20	Not rated		Not rated		Not rated	
20LF1:							
Abyss	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
20LF1:							
Astrolable	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20MD1:							
Gustavus	70	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Perouse	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20MF1:							
Geikie	55	Not limited		Not limited		Somewhat limited	
						Slope	0.14
Gustavus	30	Not limited		Not limited		Somewhat limited	
						Slope	0.14
Scidmore	15	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.91	Depth to saturated zone	1.00	Depth to saturated zone	0.91
20MF2:							
Gustavus	60	Not limited		Not limited		Somewhat limited	
						Slope	0.14
Geikie	30	Not limited		Not limited		Not limited	
20MT1:							
Bearisland	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Kadachan	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	1.00	Depth to saturated zone	1.00	Large stones	1.00
		Depth to saturated zone	0.20	Large stones	1.00	Depth to saturated zone	0.20
Rubble land	25	Not rated		Not rated		Not rated	
20MT2:							
Escures	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Polkapenn	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.23	Large stones	0.23	Large stones	0.23
Nunatak	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.92		

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MT3:							
Polkapenn	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.23	Large stones	0.23	Large stones	0.23
Bearisland	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Enigma	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	1.00	Depth to hard bedrock	1.00	Large stones	1.00
		Depth to hard bedrock	0.88	Large stones	1.00	Depth to hard bedrock	0.88
20MT4:							
Seclusion	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
20MT5:							
Rock outcrop	35	Not rated		Not rated		Not rated	
Seclusion	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Skarn	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.01	Depth to hard bedrock	1.00	Depth to hard bedrock	0.01
20MT6:							
Bergbay	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.88	Depth to hard bedrock	1.00	Depth to hard bedrock	0.88
		Large stones	0.03	Large stones	0.03	Large stones	0.03
Boussole	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Toyatte	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MT7:							
Foad	35	Very limited Slope Large stones Depth to hard bedrock	 1.00 1.00 0.54	Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 1.00	Very limited Slope Large stones Depth to hard bedrock	 1.00 1.00 0.54
Abdallah	25	Very limited Slope Large stones	 1.00 1.00	Very limited Slope Large stones	 1.00 1.00	Very limited Slope Large stones	 1.00 1.00
Justicecreek	20	Very limited Slope Organic matter content Depth to hard bedrock	 1.00 1.00 1.00	Very limited Slope Organic matter content Depth to hard bedrock	 1.00 1.00 1.00	Very limited Slope Organic matter content Depth to hard bedrock	 1.00 1.00 1.00
20MTC:							
Skarn	35	Very limited Slope Depth to hard bedrock	 1.00 0.01	Very limited Slope Depth to hard bedrock	 1.00 1.00	Very limited Slope Depth to hard bedrock	 1.00 0.01
Polkapenn	25	Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 0.23	Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 0.23	Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 0.23
Kadachan	20	Very limited Slope Large stones Depth to saturated zone	 1.00 1.00 0.20	Very limited Slope Depth to saturated zone Large stones	 1.00 1.00 1.00	Very limited Slope Large stones Depth to saturated zone	 1.00 1.00 0.20
20MTE:							
Wachusett	40	Very limited Slope Subsidence Depth to hard bedrock Depth to saturated zone	 1.00 1.00 0.99 0.44	Very limited Slope Depth to saturated zone Depth to hard bedrock Subsidence	 1.00 1.00 1.00 1.00	Very limited Slope Subsidence Depth to hard bedrock Depth to saturated zone	 1.00 1.00 0.99 0.44
Maquinna	30	Very limited Slope Subsidence Depth to hard bedrock	 1.00 1.00 0.54	Very limited Slope Depth to hard bedrock Subsidence	 1.00 1.00 1.00	Very limited Slope Subsidence Depth to hard bedrock	 1.00 1.00 0.54
Boussole	20	Very limited Depth to saturated zone Depth to hard bedrock Slope	 1.00 1.00 1.00	Very limited Depth to saturated zone Depth to hard bedrock Slope	 1.00 1.00 1.00	Very limited Slope Depth to saturated zone Depth to hard bedrock	 1.00 1.00 1.00

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MTF:							
Wachusett	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Subsidence	1.00	Depth to saturated zone	1.00	Subsidence	1.00
		Depth to hard bedrock	0.99	Depth to hard bedrock	1.00	Depth to hard bedrock	0.99
		Depth to saturated zone	0.44	Subsidence	1.00	Depth to saturated zone	0.44
Maquinna	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Subsidence	1.00	Depth to hard bedrock	1.00	Subsidence	1.00
		Depth to hard bedrock	0.54	Subsidence	1.00	Depth to hard bedrock	0.54
Enigma	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	1.00	Depth to hard bedrock	1.00	Large stones	1.00
		Depth to hard bedrock	0.88	Large stones	1.00	Depth to hard bedrock	0.88
20OC1:							
Scidmore	55	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.91	Depth to saturated zone	1.00	Depth to saturated zone	0.91
Perouse, frequently ponded	35	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20OD1:							
Gustavus	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Lamplugh	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.04	Shrink-swell	0.09	Slope	1.00
						Shrink-swell	0.04
20ODF:							
Glacierbay	50	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Geikie	30	Not limited		Not limited		Somewhat limited	
						Slope	0.14
20OP1:							
Fossil	30	Not limited		Not limited		Somewhat limited	
						Slope	0.14
Tyeen	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OP1:							
Vivid	20	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Large stones	0.03	Large stones	0.03	Large stones	0.03
20OP4:							
Kashoto	50	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
Annoksek	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
						Slope	1.00
Bulky	15	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20OP5:							
Fossil	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Tyeen	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Vivid	20	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Large stones	0.03	Large stones	0.03	Large stones	0.03
20OP6:							
Bulky	35	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Bertha	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
						Slope	0.14
Icy	15	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20OPE:							
Tyeen	40	Not limited		Not limited		Very limited	
						Slope	1.00
Shagcove	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.93	Depth to saturated zone	1.00	Depth to saturated zone	0.93

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OPE:							
Puffin	20	Very limited Flooding Depth to saturated zone	 1.00 0.05	Very limited Flooding Depth to saturated zone	 1.00 1.00	Very limited Flooding Slope Depth to saturated zone	 1.00 0.14 0.05
20OV1:							
Perouse, frequently ponded	60	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Perouse	40	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00
20OW1:							
Perouse	40	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00
Gustavus	30	Not limited		Not limited		Not limited	
Perouse, frequently ponded	20	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
20OWF:							
Fairweather	70	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Icy	30	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
20PL1:							
Tyeen	40	Somewhat limited Slope	 0.16	Somewhat limited Slope	 0.16	Very limited Slope	 1.00
Cenotaph	25	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00
Fossil	20	Not limited		Not limited		Somewhat limited Slope	 0.14
20PL2:							
Tyeen	35	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00
Fossil	30	Not limited		Not limited		Somewhat limited Slope	 0.14

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20PL2:							
Fingers	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Slope	0.14
20PL3:							
Kashoto	35	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
						Slope	0.14
Annoksek	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
Ancon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.81	Depth to hard bedrock	1.00	Depth to saturated zone	0.81
		Depth to hard bedrock	0.02	Slope	1.00	Depth to hard bedrock	0.02
20PL6:							
Tidalwave	60	Not limited		Very limited		Not limited	
				Depth to saturated zone	1.00		
Drybay	25	Not limited		Not limited		Not limited	
Puffin	15	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.05	Depth to saturated zone	1.00	Depth to saturated zone	0.05
20PLD:							
Typic Cryaquents, sandy	55	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Typic Cryorthents, sandy, rarely flooded	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
20RW2:							
Riverwash	60	Not rated		Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.91		

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20SC:							
Beaches	60	Not rated		Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
20TE2:							
Tidalwave	50	Not limited		Very limited		Not limited	
				Depth to saturated zone	1.00		
Drybay	30	Not limited		Not limited		Not limited	
20TF1:							
Water, saline	70	Not rated		Not rated		Not rated	
Astrolable	15	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Murkbay	15	Not limited		Not limited		Not limited	
20TF3:							
Water, saline	55	Not rated		Not rated		Not rated	
Astrolable	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Beartrack	15	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20TH1:							
Ibach	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.52	Large stones	0.52	Large stones	0.52
Lamplugh	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.04	Shrink-swell	0.09	Shrink-swell	0.04
Bartlettcove	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
20UL1:							
Urban land	90	Not rated		Not rated		Not rated	
20UM1:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Bearisland	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20UM2:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Bearisland	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
20VBA:							
Typic Cryofluvents	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Aquic Dystrocryepts, silty	30	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.97	Depth to saturated zone	1.00	Depth to saturated zone	0.97
20WD1:							
Perouse	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Scidmore	35	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.91	Depth to saturated zone	1.00	Depth to saturated zone	0.91
Perouse, frequently ponded	20	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
22HIA:							
Rock outcrop, rugged summit	80	Not rated		Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
22SM1:							
Woodlake	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	1.00	Depth to hard bedrock	1.00	Large stones	1.00
		Depth to hard bedrock	0.90	Large stones	1.00	Depth to hard bedrock	0.90
Flapjack	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Depth to hard bedrock	0.92	Depth to hard bedrock	1.00	Depth to hard bedrock	0.92
		Large stones	0.04	Large stones	0.04	Slope	0.14
						Large stones	0.04

Table 9.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Dwellings without basements: Value	Dwellings with basements: Rating class and limiting features	Dwellings with basements: Value	Small commercial buildings: Rating class and limiting features	Small commercial buildings: Value
BR:							
Rock outcrop--------	100	Not rated		Not rated		Not rated	
GL2:							
Glaciers------------	95	Not rated		Not rated		Not rated	
P:							
Pits----------------	90	Not rated		Not rated		Not rated	
RW:							
Riverwash-----------	90	Not rated		Not rated		Not rated	
SW:							
Water, saline-------	95	Not rated		Not rated		Not rated	
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:							
Muirpoint	65	Not limited		Very limited		Very limited	
				Unstable excavation walls	1.00	Droughty	1.00
						Low exchange capacity	0.75
						Gravel content	0.35
Puffin	15	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.02	Unstable excavation walls	1.00	Gravel content	1.00
				Flooding	0.80	Droughty	1.00
						Low exchange capacity	1.00
						Too sandy	0.50
20AF2:							
Entisols, alluvial fans, occasionally flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Unstable excavation walls	1.00	Droughty	1.00
		Slope	1.00	Slope	1.00	Low exchange capacity	1.00
				Depth to saturated zone	0.95	Slope	1.00
				Flooding	0.60	Flooding	0.60
20CL1:							
Strawberry	60	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.64	Depth to saturated zone	1.00	Depth to saturated zone	0.64
		Frost action	0.50	Unstable excavation walls	0.01		
Fingerock	20	Not limited		Very limited		Very limited	
				Unstable excavation walls	1.00	Droughty	1.00
				Depth to saturated zone	0.96	Low exchange capacity	1.00
20CP1:							
Oberlin	55	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Droughty	0.99
						Low exchange capacity	0.75
Perouse, frequently ponded	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Droughty	0.45

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20CP1:							
Perouse	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Droughty	0.45
20CP2:							
Beaches	50	Not rated		Not rated		Not rated	
Monashka	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Low exchange capacity	1.00
						Droughty	0.60
Murkbay	25	Not limited		Very limited		Very limited	
				Unstable excavation walls	1.00	Droughty	1.00
20CPF:							
Icy	45	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.01		
		Low strength	1.00				
Excursion	40	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
		Frost action	1.00	Unstable excavation walls	0.01	Depth to saturated zone	1.00
20ED1:							
Gustavus	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Unstable excavation walls	0.92	Droughty	0.08
Bartlettcove	20	Very limited		Very limited		Very limited	
		Slope	1.00	Unstable excavation walls	1.00	Slope	1.00
				Slope	1.00	Droughty	0.08
20ED2:							
Beardslee	60	Not limited		Very limited		Somewhat limited	
				Unstable excavation walls	1.00	Droughty	0.46
Monashka	40	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Low exchange capacity	1.00
						Droughty	0.60

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20FP1:							
Drybay	70	Not limited		Very limited		Very limited	
				Unstable excavation walls	1.00	Droughty	1.00
Tidalwave	30	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Droughty	0.13
				Unstable excavation walls	1.00		
20FP2:							
Bertha	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Unstable excavation walls	1.00	Droughty	1.00
						Low exchange capacity	1.00
				Flooding	0.60		
						Flooding	0.60
Puffin	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.02			Gravel content	1.00
				Unstable excavation walls	1.00	Droughty	1.00
						Low exchange capacity	1.00
				Flooding	0.80		
						Too sandy	0.50
20FP3:							
Tidalwave	60	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Droughty	0.13
				Unstable excavation walls	1.00		
Ashmun, frequently ponded	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Droughty	1.00
						Low exchange capacity	1.00
Drybay	15	Not limited		Very limited		Very limited	
				Unstable excavation walls	1.00	Droughty	1.00
20FPL:							
Cryaquepts	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.80		
		Frost action	0.50	Unstable excavation walls	0.57	Droughty	1.00
						Gravel content	0.75
						Low exchange capacity	0.75

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20FPL:							
Typic Cryaquents, gravelly, very poorly drained	30	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Unstable excavation walls	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Flooding	0.80	Droughty	1.00
						Low exchange capacity	1.00
Water	30	Not rated		Not rated		Not rated	
20FPM:							
Typic Cryaquents, silty	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Low exchange capacity	1.00
		Flooding	1.00	Unstable excavation walls	0.01	Flooding	0.60
20FPY:							
Oxyaquic Cryorthents, sandy or gravelly	60	Somewhat limited		Very limited		Very limited	
		Flooding	0.40	Unstable excavation walls	1.00	Low exchange capacity	1.00
				Depth to saturated zone	0.91	Droughty	1.00
						Gravel content	0.54
Typic Cryaquents, sandy or gravelly	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Unstable excavation walls	0.01	Droughty	0.26
20FPZ:							
Typic Cryorthents, gravelly	60	Somewhat limited		Very limited		Very limited	
		Flooding	0.20	Unstable excavation walls	1.00	Droughty	1.00
						Gravel content	0.88
						Low exchange capacity	0.75
Typic Cryofluvents	30	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Unstable excavation walls	1.00	Droughty	0.69
				Flooding	0.60	Flooding	0.60
20GP1:							
Gustavus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Unstable excavation walls	0.92	Droughty	0.08

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20GP1:							
Ibach	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	0.52	Unstable excavation walls	0.95	Large stones content	1.00
		Frost action	0.50	Large stones	0.52	Droughty	0.85
Scidmore	25	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.60	Depth to saturated zone	1.00	Droughty	0.99
				Unstable excavation walls	1.00	Depth to saturated zone	0.60
20HI1:							
Foad	65	Very limited		Very limited		Very limited	
		Large stones	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Large stones	1.00	Large stones content	1.00
		Depth to hard bedrock	0.54	Slope	1.00	Depth to bedrock	0.21
		Frost action	0.50	Unstable excavation walls	0.01		
Boussole	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Low exchange capacity	1.00
		Low strength	1.00	Depth to saturated zone	1.00	Depth to bedrock	0.99
		Depth to saturated zone	0.88	Unstable excavation walls	0.01	Depth to saturated zone	0.88
		Frost action	0.50				
20HI2:							
Kashoto	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Organic matter content	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.01		
		Low strength	1.00				
Foad	25	Very limited		Very limited		Very limited	
		Large stones	1.00	Depth to hard bedrock	1.00	Large stones content	1.00
		Slope	1.00	Large stones	1.00	Slope	1.00
		Depth to hard bedrock	0.54	Slope	1.00	Depth to bedrock	0.21
		Frost action	0.50	Unstable excavation walls	0.01		
Kutskloh	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Large stones	1.00	Large stones	1.00	Low exchange capacity	1.00
		Frost action	0.50	Unstable excavation walls	0.89	Gravel content	0.05

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HI3:							
Polkapenn	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones	0.23	Droughty	1.00
		Large stones	0.23	Unstable excavation walls	0.01	Large stones content	1.00
Dagelet	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.96	Slope	1.00	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Depth to bedrock	0.92
Nunatak	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.92	Droughty	1.00
				Unstable excavation walls	0.01	Large stones content	0.32
						Gravel content	0.10
20HI5:							
Kaknau	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to soft bedrock	0.23	Depth to bedrock	0.14
				Unstable excavation walls	0.01		
Tricklake	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Unstable excavation walls	0.01		
20HIB:							
Drybay	35	Not limited		Very limited		Very limited	
				Unstable excavation walls	1.00	Droughty	1.00
Kaknau	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to soft bedrock	0.23	Depth to bedrock	0.14
				Unstable excavation walls	0.01		
Vivid	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Large stones	0.03	Low exchange capacity	0.75
		Large stones	0.03	Unstable excavation walls	0.01		

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HID:							
Grandplateau	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Depth to hard bedrock	0.38		
		Low strength	1.00	Unstable excavation walls	0.01		
Crillon	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to saturated zone	0.60	Depth to saturated zone	1.00	Depth to bedrock	0.92
		Frost action	0.50	Slope	1.00	Low exchange capacity	0.75
		Depth to hard bedrock	0.32	Depth to soft bedrock	0.92	Depth to saturated zone	0.60 0.60
				Unstable excavation walls	0.01		
20HIE:							
Kashoto	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Organic matter content	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.01		
		Low strength	1.00				
Kutskloh	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Large stones	1.00	Large stones	1.00	Low exchange capacity	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Unstable excavation walls	0.89	Gravel content	0.05
Wachusett	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Subsidence	1.00	Slope	1.00	Depth to saturated zone	0.22
		Depth to hard bedrock	0.99	Depth to saturated zone	1.00	Depth to bedrock	0.18
		Frost action	0.50	Unstable excavation walls	0.01		
		Depth to saturated zone	0.22				
20HIF:							
Kashoto	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Organic matter content	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.01		
		Low strength	1.00				

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HIF:							
Wachusett	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Subsidence	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.22
		Depth to hard bedrock	0.99	Slope	1.00	Depth to bedrock	0.18
		Frost action	0.50	Unstable excavation walls	0.01		
		Depth to saturated zone	0.22				
20HIN:							
Polkapenn	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones	0.23	Droughty	1.00
		Large stones	0.23	Unstable excavation walls	0.01	Large stones content	1.00
Nunatak	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.92	Droughty	1.00
				Unstable excavation walls	0.01	Large stones	0.32
						Gravel content	0.10
20HIS:							
Lithic Cryorthents, rugged summit	46	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to bedrock	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Depth to saturated zone	0.99
						Gravel content	0.75
Typic Humicryepts, high elevation	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to saturated zone	1.00	Gravel content	0.99
		Depth to saturated zone	0.04	Unstable excavation walls	0.01	Droughty	0.22
						Depth to saturated zone	0.04
20IS1:							
Cenotaph	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.01	Gravel content	0.14
						Large stones content	0.01
Water, saline	35	Not rated		Not rated		Not rated	
Beaches	20	Not rated		Not rated		Not rated	

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20LF1:							
Abyss	55	Very limited Depth to saturated zone Flooding Frost action	 1.00 1.00 0.50	Very limited Depth to saturated zone Unstable excavation walls Flooding	 1.00 1.00 0.60	Very limited Depth to saturated zone Droughty Flooding Low exchange capacity	 1.00 0.99 0.60 0.50
Astrolable	30	Very limited Depth to saturated zone Flooding Frost action	 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Unstable excavation walls	 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Droughty	 1.00 1.00 1.00
20MD1:							
Gustavus	70	Somewhat limited Slope	 0.16	Somewhat limited Unstable excavation walls Slope	 0.92 0.16	Somewhat limited Slope Droughty	 0.16 0.08
Perouse	20	Very limited Depth to saturated zone Frost action	 1.00 0.50	Very limited Depth to saturated zone Unstable excavation walls	 1.00 1.00	Very limited Depth to saturated zone Droughty	 1.00 0.45
20MF1:							
Geikie	55	Somewhat limited Frost action	 0.50	Somewhat limited Unstable excavation walls	 0.91	Somewhat limited Low exchange capacity	 0.75
Gustavus	30	Not limited		Somewhat limited Unstable excavation walls	 0.92	Somewhat limited Droughty	 0.08
Scidmore	15	Somewhat limited Depth to saturated zone	 0.60	Very limited Depth to saturated zone Unstable excavation walls	 1.00 1.00	Somewhat limited Droughty Depth to saturated zone	 0.99 0.60
20MF2:							
Gustavus	60	Not limited		Somewhat limited Unstable excavation walls	 0.92	Somewhat limited Droughty	 0.08
Geikie	30	Somewhat limited Frost action	 0.50	Somewhat limited Unstable excavation walls	 0.91	Somewhat limited Low exchange capacity	 0.75
20MT1:							
Bearisland	35	Very limited Slope	 1.00	Very limited Slope Unstable excavation walls	 1.00 0.05	Very limited Slope Droughty Gravel content Low exchange capacity Large stones content	 1.00 1.00 1.00 0.75 0.01

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MT1:							
Kadachan------------	30	Very limited		Very limited		Very limited	
		Large stones	1.00	Large stones	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Depth to saturated zone	1.00	Low exchange capacity	1.00
		Depth to saturated zone	0.10	Unstable excavation walls	1.00	Depth to saturated zone	0.10
Rubble land---------	25	Not rated		Not rated		Not rated	
20MT2:							
Escures-------------	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Depth to bedrock	0.99
						Gravel content	0.05
						Large stones content	0.01
Polkapenn-----------	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones	0.23	Droughty	1.00
		Large stones	0.23	Unstable excavation walls	0.01	Large stones content	1.00
Nunatak-------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.92	Droughty	1.00
				Unstable excavation walls	0.01	Large stones content	0.32
						Gravel content	0.10
20MT3:							
Polkapenn-----------	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones	0.23	Droughty	1.00
		Large stones	0.23	Unstable excavation walls	0.01	Large stones content	1.00
Bearisland----------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Unstable excavation walls	0.05	Droughty	1.00
						Gravel content	1.00
						Low exchange capacity	0.75
						Large stones content	0.01
Enigma--------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Large stones	1.00	Slope	1.00	Droughty	1.00
		Depth to hard bedrock	0.88	Unstable excavation walls	1.00	Large stones content	1.00
		Frost action	0.50	Large stones	1.00	Depth to bedrock	0.89
						Low exchange capacity	0.75

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MT4:							
Seclusion	65	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Organic matter content	1.00	Droughty	1.00
				Unstable excavation walls	0.01	Gravel content	0.78
						Large stones content	0.20
Rock outcrop	25	Not rated		Not rated		Not rated	
20MT5:							
Rock outcrop	35	Not rated		Not rated		Not rated	
Seclusion	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Organic matter content	1.00	Droughty	1.00
				Unstable excavation walls	0.01	Gravel content	0.78
						Large stones content	0.20
Skarn	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.92
		Depth to hard bedrock	0.01	Unstable excavation walls	0.01	Droughty	0.09
20MT6:							
Bergbay	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.88	Slope	1.00	Droughty	0.88
		Frost action	0.50	Large stones	0.03	Large stones content	0.79
		Large stones	0.03	Unstable excavation walls	0.01	Depth to bedrock	0.68
Boussole	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Low exchange capacity	1.00
		Low strength	1.00	Depth to saturated zone	1.00	Depth to bedrock	0.99
		Depth to saturated zone	0.88	Unstable excavation walls	0.01	Depth to saturated zone	0.88
		Frost action	0.50				
Toyatte	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Low strength	1.00	Organic matter content	1.00		
		Subsidence	1.00	Unstable excavation walls	0.01		

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MT7:							
Foad	35	Very limited		Very limited		Very limited	
		Large stones	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Large stones	1.00	Large stones content	1.00
		Depth to hard bedrock	0.54	Slope	1.00	Depth to bedrock	0.21
		Frost action	0.50	Unstable excavation walls	0.01		
Abdallah	25	Very limited		Very limited		Very limited	
		Large stones	1.00	Large stones	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Large stones content	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Droughty	1.00
						Low exchange capacity	1.00
Justicecreek	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Organic matter content	1.00	Droughty	0.01
		Low strength	1.00	Unstable excavation walls	0.01		
20MTC:							
Skarn	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.92
		Depth to hard bedrock	0.01	Unstable excavation walls	0.01	Droughty	0.09
Polkapenn	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones	0.23	Droughty	1.00
		Large stones	0.23	Unstable excavation walls	0.01	Large stones content	1.00
Kadachan	20	Very limited		Very limited		Very limited	
		Large stones	1.00	Large stones	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Depth to saturated zone	1.00	Low exchange capacity	1.00
		Depth to saturated zone	0.10	Unstable excavation walls	1.00	Depth to saturated zone	0.10
20MTE:							
Wachusett	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Subsidence	1.00	Slope	1.00	Depth to saturated zone	0.22
		Depth to hard bedrock	0.99	Depth to saturated zone	1.00	Depth to bedrock	0.18
		Frost action	0.50	Unstable excavation walls	0.01		
		Depth to saturated zone	0.22				

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MTE:							
Maquinna	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Subsidence	1.00	Slope	1.00	Gravel content	0.88
		Depth to hard bedrock	0.54	Unstable excavation walls	0.01	Low exchange capacity	0.75
		Frost action	0.50				
Boussole	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Low exchange capacity	1.00
		Low strength	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	0.99
		Depth to saturated zone	0.88	Unstable excavation walls	0.01	Depth to saturated zone	0.88
		Frost action	0.50				
20MTF:							
Wachusett	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Subsidence	1.00	Slope	1.00	Depth to saturated zone	0.22
		Depth to hard bedrock	0.99	Depth to saturated zone	1.00	Depth to bedrock	0.18
		Frost action	0.50	Unstable excavation walls	0.01		
		Depth to saturated zone	0.22				
Maquinna	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Subsidence	1.00	Slope	1.00	Gravel content	0.88
		Depth to hard bedrock	0.54	Unstable excavation walls	0.01	Low exchange capacity	0.75
		Frost action	0.50				
Enigma	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Large stones	1.00	Slope	1.00	Droughty	1.00
		Depth to hard bedrock	0.88	Unstable excavation walls	1.00	Large stones content	1.00
		Frost action	0.50	Large stones	1.00	Depth to bedrock	0.89
						Low exchange capacity	0.75
20OC1:							
Scidmore	55	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.60	Depth to saturated zone	1.00	Droughty	0.99
				Unstable excavation walls	1.00	Depth to saturated zone	0.60
Perouse, frequently ponded	35	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Droughty	0.45

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OD1:							
Gustavus	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Unstable excavation walls	0.92	Droughty	0.08
Lamplugh	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.01		
		Low strength	1.00				
		Shrink-swell	0.04				
20ODF:							
Glacierbay	50	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.01		
		Low strength	0.12				
Geikie	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Unstable excavation walls	0.91	Low exchange capacity	0.75
20OP1:							
Fossil	30	Not limited		Very limited		Somewhat limited	
				Unstable excavation walls	1.00	Droughty	0.99
						Large stones content	0.01
Tyeen	25	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.16	Droughty	0.96
		Slope	0.16	Unstable excavation walls	0.01	Gravel content	0.91
						Large stones content	0.68
						Slope	0.16
Vivid	20	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Large stones	0.03	Low exchange capacity	0.75
		Large stones	0.03	Unstable excavation walls	0.01		
20OP4:							
Kashoto	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Organic matter content	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.01		
		Low strength	1.00				
Annoksek	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	1.00	Unstable excavation walls	0.01	Droughty	0.88
		Low strength	1.00			Low exchange capacity	0.75

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OP4:							
Bulky	15	Very limited Ponding Depth to saturated zone Frost action	 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Unstable excavation walls	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Droughty	 1.00 1.00 0.17
20OP5:							
Fossil	35	Very limited Slope	 1.00	Very limited Slope Unstable excavation walls	 1.00 1.00	Very limited Slope Droughty Large stones content	 1.00 0.99 0.01
Tyeen	25	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Unstable excavation walls	 1.00 0.01	Very limited Slope Droughty Gravel content Large stones content	 1.00 0.96 0.91 0.68
Vivid	20	Very limited Ponding Slope Depth to saturated zone Frost action Large stones	 1.00 1.00 1.00 1.00 0.03	Very limited Ponding Slope Depth to saturated zone Large stones Unstable excavation walls	 1.00 1.00 1.00 0.03 0.01	Very limited Ponding Slope Depth to saturated zone Low exchange capacity	 1.00 1.00 1.00 0.75
20OP6:							
Bulky	35	Very limited Ponding Depth to saturated zone Frost action	 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Unstable excavation walls	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Droughty	 1.00 1.00 0.17
Bertha	30	Very limited Flooding	 1.00	Very limited Unstable excavation walls Flooding	 1.00 0.60	Very limited Droughty Low exchange capacity Flooding	 1.00 1.00 0.60
Icy	15	Very limited Ponding Depth to saturated zone Frost action Low strength	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Unstable excavation walls	 1.00 1.00 0.01	Very limited Ponding Depth to saturated zone	 1.00 1.00
20OPE:							
Tyeen	40	Somewhat limited Frost action	 0.50	Somewhat limited Unstable excavation walls	 0.01	Somewhat limited Droughty Gravel content Large stones content	 0.96 0.91 0.68

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OPE:							
Shagcove	30	Somewhat limited Depth to saturated zone	 0.64	Very limited Depth to saturated zone Unstable excavation walls	 1.00 0.49	Very limited Droughty Large stones content Depth to saturated zone	 1.00 0.79 0.64
Puffin	20	Very limited Flooding Depth to saturated zone	 1.00 0.02	Very limited Depth to saturated zone Unstable excavation walls Flooding	 1.00 1.00 0.80	Very limited Flooding Gravel content Droughty Low exchange capacity Too sandy	 1.00 1.00 1.00 1.00 0.50
20OV1:							
Perouse, frequently ponded	60	Very limited Ponding Depth to saturated zone Frost action	 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Unstable excavation walls	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Droughty	 1.00 1.00 0.45
Perouse	40	Very limited Depth to saturated zone Frost action	 1.00 0.50	Very limited Depth to saturated zone Unstable excavation walls	 1.00 1.00	Very limited Depth to saturated zone Droughty	 1.00 0.45
20OW1:							
Perouse	40	Very limited Depth to saturated zone Frost action	 1.00 0.50	Very limited Depth to saturated zone Unstable excavation walls	 1.00 1.00	Very limited Depth to saturated zone Droughty	 1.00 0.45
Gustavus	30	Not limited		Somewhat limited Unstable excavation walls	 0.92	Somewhat limited Droughty	 0.08
Perouse, frequently ponded	20	Very limited Ponding Depth to saturated zone Frost action	 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Unstable excavation walls	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Droughty	 1.00 1.00 0.45
20OWF:							
Fairweather	70	Very limited Ponding Depth to saturated zone Frost action	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Unstable excavation walls	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Droughty	 1.00 1.00 0.22

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OWF:							
Icy	30	Very limited Ponding Depth to saturated zone Frost action Low strength	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Unstable excavation walls	 1.00 1.00 0.01	Very limited Ponding Depth to saturated zone	 1.00 1.00
20PL1:							
Tyeen	40	Somewhat limited Frost action Slope	 0.50 0.16	Somewhat limited Slope Unstable excavation walls	 0.16 0.01	Somewhat limited Droughty Gravel content Large stones content Slope	 0.96 0.91 0.68 0.16
Cenotaph	25	Very limited Depth to saturated zone Frost action	 1.00 1.00	Very limited Depth to saturated zone Unstable excavation walls	 1.00 0.01	Very limited Depth to saturated zone Gravel content Large stones content	 1.00 0.14 0.01
Fossil	20	Not limited		Very limited Unstable excavation walls	 1.00	Somewhat limited Droughty Large stones content	 0.99 0.01
20PL2:							
Tyeen	35	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Unstable excavation walls	 1.00 0.01	Very limited Slope Droughty Gravel content Large stones content	 1.00 0.96 0.91 0.68
Fossil	30	Not limited		Very limited Unstable excavation walls	 1.00	Somewhat limited Droughty Large stones content	 0.99 0.01
Fingers	15	Somewhat limited Depth to saturated zone	 0.83	Very limited Depth to saturated zone Unstable excavation walls	 1.00 1.00	Very limited Droughty Gravel content Depth to saturated zone Large stones content	 1.00 0.95 0.83 0.03
20PL3:							
Kashoto	35	Very limited Depth to saturated zone Subsidence Frost action Low strength	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Organic matter content Unstable excavation walls	 1.00 1.00 0.01	Very limited Organic matter content Depth to saturated zone	 1.00 1.00

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20PL3:							
Annoksek	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	1.00	Slope	0.16	Droughty	0.88
		Low strength	1.00	Unstable excavation walls	0.01	Low exchange capacity	0.75
		Slope	0.16			Slope	0.16
Ancon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Depth to saturated zone	0.48	Slope	1.00		
		Depth to hard bedrock	0.02	Unstable excavation walls	0.01		
20PL6:							
Tidalwave	60	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Droughty	0.13
				Unstable excavation walls	1.00		
Drybay	25	Not limited		Very limited		Very limited	
				Unstable excavation walls	1.00	Droughty	1.00
Puffin	15	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.02	Unstable excavation walls	1.00	Gravel content	1.00
				Flooding	0.80	Droughty	1.00
						Low exchange capacity	1.00
						Too sandy	0.50
20PLD:							
Typic Cryaquents, sandy	55	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Unstable excavation walls	1.00	Droughty	0.79
		Frost action	0.50	Flooding	0.60	Flooding	0.60
Typic Cryorthents, sandy, rarely flooded	30	Somewhat limited		Very limited		Somewhat limited	
		Flooding	0.40	Unstable excavation walls	1.00	Droughty	0.83
20RW2:							
Riverwash	60	Not rated		Not rated		Not rated	

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20RW2:							
Oxyaquic Cryorthents, sandy or gravelly	25	Somewhat limited Flooding	 0.40	Very limited Unstable excavation walls Depth to saturated zone	 1.00 0.91	Very limited Low exchange capacity Droughty Gravel content	 1.00 1.00 0.54
20SC:							
Beaches	60	Not rated		Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Somewhat limited Flooding	 0.40	Very limited Unstable excavation walls	 1.00	Very limited Low exchange capacity Droughty	 1.00 1.00
20TE2:							
Tidalwave	50	Not limited		Very limited Depth to saturated zone Unstable excavation walls	 1.00 1.00	Somewhat limited Droughty	 0.13
Drybay	30	Not limited		Very limited Unstable excavation walls	 1.00	Very limited Droughty	 1.00
20TF1:							
Water, saline	70	Not rated		Not rated		Not rated	
Astrolable	15	Very limited Depth to saturated zone Flooding Frost action	 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Unstable excavation walls	 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Droughty	 1.00 1.00 1.00
Murkbay	15	Not limited		Very limited Unstable excavation walls	 1.00	Very limited Droughty	 1.00
20TF3:							
Water, saline	55	Not rated		Not rated		Not rated	
Astrolable	20	Very limited Depth to saturated zone Flooding Frost action	 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Unstable excavation walls	 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Droughty	 1.00 1.00 1.00
Beartrack	15	Very limited Depth to saturated zone Frost action Flooding	 1.00 1.00 1.00	Very limited Depth to saturated zone Flooding Unstable excavation walls	 1.00 0.80 0.01	Very limited Flooding Depth to saturated zone	 1.00 1.00

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20TH1:							
Ibach	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Large stones content	1.00
		Large stones	0.52	Unstable excavation walls	0.95	Slope	1.00
		Frost action	0.50	Large stones	0.52	Droughty	0.85
Lamplugh	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Unstable excavation walls	0.01		
		Low strength	1.00				
		Shrink-swell	0.04				
Bartlettcove	20	Very limited		Very limited		Very limited	
		Slope	1.00	Unstable excavation walls	1.00	Slope	1.00
				Slope	1.00	Droughty	0.08
20UL1:							
Urban land	90	Not rated		Not rated		Not rated	
20UM1:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Bearisland	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Unstable excavation walls	0.05	Droughty	1.00
						Gravel content	1.00
						Low exchange capacity	0.75
						Large stones content	0.01
20UM2:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Bearisland	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Droughty	1.00
				Unstable excavation walls	0.05	Gravel content	1.00
						Slope	1.00
						Low exchange capacity	0.75
						Large stones content	0.01
20VBA:							
Typic Cryofluvents	50	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Unstable excavation walls	1.00	Droughty	0.69
				Flooding	0.60	Flooding	0.60
Aquic Dystrocryepts, silty	30	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.71
		Depth to saturated zone	0.71	Flooding	0.60	Flooding	0.60
		Frost action	0.50	Unstable excavation walls	0.01		

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20WD1:							
Perouse	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Droughty	0.45
Scidmore	35	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.60	Depth to saturated zone	1.00	Droughty	0.99
				Unstable excavation walls	1.00	Depth to saturated zone	0.60
Perouse, frequently ponded	20	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Unstable excavation walls	1.00	Droughty	0.45
22HIA:							
Rock outcrop, rugged summit	80	Not rated		Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to bedrock	1.00
		Frost action	0.50	Unstable excavation walls	0.01	Depth to saturated zone	0.99
						Gravel content	0.75
22SM1:							
Woodlake	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Large stones	1.00	Slope	1.00	Large stones content	1.00
		Depth to hard bedrock	0.90	Large stones	1.00	Droughty	1.00
		Frost action	0.50	Unstable excavation walls	0.89	Depth to bedrock	0.68
Flapjack	30	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.92	Depth to hard bedrock	1.00	Large stones content	1.00
		Depth to saturated zone	0.78	Depth to saturated zone	1.00	Droughty	1.00
		Frost action	0.50	Large stones	0.04	Depth to bedrock	0.84
		Large stones	0.04	Unstable excavation walls	0.01	Depth to saturated zone	0.78
BR:							
Rock outcrop	100	Not rated		Not rated		Not rated	
GL2:							
Glaciers	95	Not rated		Not rated		Not rated	

Table 10.—Roads and Streets, Shallow Excavations, and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
P:							
Pits	90	Not rated		Not rated		Not rated	
RW:							
Riverwash	90	Not rated		Not rated		Not rated	
SW:							
Water, saline	95	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	

Table 11.—Sewage Disposal

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
20AF1:					
Muirpoint	65	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
Puffin	15	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Slope	0.68
20AF2:					
Entisols, alluvial fans, occasionally flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00		
20CL1:					
Strawberry	60	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.92	Seepage	0.08
Fingerock	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
20CP1:					
Oberlin	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Perouse, frequently ponded	25	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20CP1:					
Perouse	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
20CP2:					
Beaches	50	Not rated		Not rated	
Monashka	25	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Murkbay	25	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
20CPF:					
Icy	45	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.68	Depth to saturated zone	1.00
Excursion	40	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
				Seepage	1.00
20ED1:					
Gustavus	75	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	1.00		
Bartlettcove	20	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	1.00		
20ED2:					
Beardslee	60	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.68

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
20ED2:					
Monashka	40	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
20FP1:					
Drybay	70	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.68
Tidalwave	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
20FP2:					
Bertha	55	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Organic matter content	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
Puffin	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
20FP3:					
Tidalwave	60	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Ashmun, frequently ponded	25	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Drybay	15	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20FPL:					
Cryaquepts	40	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Slope	0.08
Typic Cryaquents, gravelly, very poorly drained	30	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Water	30	Not rated		Not rated	
20FPM:					
Typic Cryaquents, silty	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	0.50	Depth to saturated zone	1.00
				Seepage	0.50
				Slope	0.02
20FPY:					
Oxyaquic Cryorthents, sandy or gravelly	60	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Flooding	0.40
		Flooding	0.40	Slope	0.02
Typic Cryaquents, sandy or gravelly	25	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	0.50	Depth to saturated zone	1.00
				Seepage	1.00
				Slope	0.02
20FPZ:					
Typic Cryorthents, gravelly	60	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Flooding	0.20
		Flooding	0.20	Slope	0.02

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20FPZ:					
Typic Cryofluvents	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	0.02
20GP1:					
Gustavus	35	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
Ibach	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.92	Large stones	1.00
		Large stones	0.52	Seepage	0.08
Scidmore	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Slope	0.08
20HI1:					
Foad	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope		Slope	1.00
		Large stones	1.00	Large stones	1.00
		Slow water movement	0.68	Seepage	0.32
Boussole	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
20HI2:					
Kashoto	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
Foad	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	1.00	Slope	1.00
		Slope	1.00	Large stones	1.00
		Slow water movement	0.68	Seepage	0.32

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HI2:					
Kutskloh	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Large stones	1.00	Large stones	0.78
		Slow water movement	0.68	Seepage	0.32
20HI3:					
Polkapenn	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.23	Large stones	0.98
Dagelet	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Nunatak	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to hard bedrock	0.92
		Depth to bedrock	0.95		
20HI5:					
Kaknau	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	1.00
				Large stones	0.11
Tricklake	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
20HIB:					
Drybay	35	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
Kaknau	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	1.00
				Large stones	0.11

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HIB:					
Vivid	25	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.03	Slope	0.68
20HID:					
Grandplateau	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Depth to bedrock	0.72	Depth to hard bedrock	0.38
		Slow water movement	0.68	Seepage	0.32
Crillon	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Organic matter content	1.00
				Slope	1.00
				Depth to saturated zone	1.00
20HIE:					
Kashoto	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
Kutskloh	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Large stones	1.00	Slope	1.00
		Slope	1.00	Large stones	0.78
		Slow water movement	0.68	Seepage	0.32
Wachusett	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
20HIF:					
Kashoto	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
20HIF:					
Wachusett	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Slope	1.00
20HIN:					
Polkapenn	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.23	Large stones	0.98
Nunatak	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to hard bedrock	0.92
		Depth to bedrock	0.95		
20HIS:					
Lithic Cryorthents, rugged summit	46	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones	0.04
Typic Humicryepts, high elevation	44	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
20IS1:					
Cenotaph	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.98	Seepage	1.00
				Slope	0.08
Water, saline	35	Not rated		Not rated	
Beaches	20	Not rated		Not rated	

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20LF1:					
Abyss	55	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Astrolable	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
20MD1:					
Gustavus	70	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.16		
Perouse	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
20MF1:					
Geikie	55	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.68
Gustavus	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.68
Scidmore	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
20MF2:					
Gustavus	60	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.68
Geikie	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT1:					
Bearisland	35	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
Kadachan	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Filtering capacity	1.00	Large stones	1.00
		Slope	1.00	Seepage	1.00
		Large stones	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Rubble land	25	Not rated		Not rated	
20MT2:					
Escures	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Polkapenn	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.23	Large stones	0.98
Nunatak	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to hard bedrock	0.92
		Depth to bedrock	0.95		
20MT3:					
Polkapenn	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.23	Large stones	0.98
Bearisland	25	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
Enigma	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Large stones	1.00	Large stones	1.00
		Seepage, bottom layer	1.00		

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT4:					
Seclusion	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Rock outcrop	25	Not rated		Not rated	
20MT5:					
Rock outcrop	35	Not rated		Not rated	
Seclusion	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Skarn	20	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.99		
20MT6:					
Bergbay	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Large stones	0.09
		Large stones	0.03		
Boussole	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Toyatte	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
				Depth to saturated zone	1.00
20MT7:					
Foad	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	1.00	Large stones	1.00
		Slow water movement	0.68	Seepage	0.32

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT7:					
Abdallah	25	Very limited		Very limited	
		Slope	1.00	Organic matter content	1.00
		Large stones	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Large stones	1.00
				Seepage	1.00
Justicecreek	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00		
20MTC:					
Skarn	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.99		
Polkapenn	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.23	Large stones	0.98
Kadachan	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Filtering capacity	1.00	Large stones	1.00
		Slope	1.00	Seepage	1.00
		Large stones	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
20MTE:					
Wachusett	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Maquinna	30	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	0.99	Slope	1.00
		Slow water movement	0.68	Seepage	1.00
Boussole	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MTF:					
Wachusett	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Maquinna	25	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	0.99	Slope	1.00
		Slow water movement	0.68	Seepage	1.00
Enigma	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Large stones	1.00	Large stones	1.00
		Seepage, bottom layer	1.00		
20OC1:					
Scidmore	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Perouse, frequently ponded	35	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
20OD1:					
Gustavus	45	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	1.00		
Lamplugh	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	1.00
				Slope	1.00

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
20ODF:					
Glacierbay	50	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	0.92	Depth to saturated zone	1.00
				Seepage	0.08
				Slope	0.08
Geikie	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.68
20OP1:					
Fossil	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.68
Tyeen	25	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.16	Slope	1.00
				Large stones	0.02
Vivid	20	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.03		
20OP4:					
Kashoto	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Annoksek	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
Bulky	15	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Slope	0.08
20OP5:					
Fossil	35	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OP5:					
Tyeen	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones	0.02
Vivid	20	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.03		
20OP6:					
Bulky	35	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Bertha	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Organic matter content	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
Icy	15	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.68	Depth to saturated zone	1.00
20OPE:					
Tyeen	40	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
				Large stones	0.02
Shagcove	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Puffin	20	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Slope	0.68

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20OV1:					
Perouse, frequently ponded	60	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Perouse	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
20OW1:					
Perouse	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Gustavus	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.08
Perouse, frequently ponded	20	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
20OWF:					
Fairweather	70	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Icy	30	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.68	Depth to saturated zone	1.00
20PL1:					
Tyeen	40	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.16	Seepage	1.00
				Large stones	0.02

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
20PL1:					
Cenotaph	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.98	Seepage	1.00
Fossil	20	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.68
20PL2:					
Tyeen	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones	0.02
Fossil	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.68
Fingers	15	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Slope	0.68
20PL3:					
Kashoto	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
Annoksek	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.16		
Ancon	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to hard bedrock	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99		
20PL6:					
Tidalwave	60	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Slope	0.08

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20PL6:					
Drybay	25	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
Puffin	15	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
20PLD:					
Typic Cryaquents, sandy	55	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Typic Cryorthents, sandy, rarely flooded	30	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Flooding	0.40
		Flooding	0.40	Slope	0.02
20RW2:					
Riverwash	60	Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Flooding	0.40
		Flooding	0.40	Slope	0.02
20SC:					
Beaches	60	Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Flooding	0.40
		Flooding	0.40	Slope	0.02

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20TE2:					
Tidalwave	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Drybay	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
20TF1:					
Water, saline	70	Not rated		Not rated	
Astrolable	15	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Murkbay	15	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.08
20TF3:					
Water, saline	55	Not rated		Not rated	
Astrolable	20	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Beartrack	15	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.68	Seepage	0.32
20TH1:					
Ibach	40	Very limited		Very limited	
		Slope	1.00	Large stones	1.00
		Slow water movement	0.92	Slope	1.00
		Large stones	0.52	Seepage	0.08
Lamplugh	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	1.00
				Slope	0.08

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20TH1:					
Bartlettcove	20	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	1.00		
20UL1:					
Urban land	90	Not rated		Not rated	
20UM1:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
20UM2:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	1.00		
20VBA:					
Typic Cryofluvents	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	0.02
Aquic Dystrocryepts, silty	30	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	1.00
				Slope	0.02
20WD1:					
Perouse	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Scidmore	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		

Table 11.—Sewage Disposal—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20WD1:					
Perouse, frequently ponded	20	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
22HIA:					
Rock outcrop, rugged summit	80	Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones	0.04
22SM1:					
Woodlake	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	1.00	Large stones	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Flapjack	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.92	Large stones	0.90
		Large stones	0.04	Slope	0.68
				Seepage	0.08
BR:					
Rock outcrop	100	Not rated		Not rated	
GL2:					
Glaciers	95	Not rated		Not rated	
P:					
Pits	90	Not rated		Not rated	
RW:					
Riverwash	90	Not rated		Not rated	
SW:					
Water, saline	95	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	

Table 12.—Source of Gravel and Sand

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:					
Muirpoint	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.54
		Thickest layer	0.00	Thickest layer	0.71
Puffin	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.61
		Thickest layer	0.00	Thickest layer	0.74
20AF2:					
Entisols, alluvial fans, occasionally flooded	90	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.83
		Bottom layer	0.00	Thickest layer	0.86
20CL1:					
Strawberry	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.07
Fingerock	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.14
		Thickest layer	0.00	Thickest layer	0.90
20CP1:					
Oberlin	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.56
		Thickest layer	0.00	Bottom layer	0.70
Perouse, frequently ponded	25	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
Perouse	15	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
20CP2:					
Beaches	50	Not rated		Not rated	
Monashka	25	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.84
		Thickest layer	0.00		
Murkbay	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.31
		Thickest layer	0.00	Thickest layer	0.99

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source: Rating class and limiting features	Gravel source: Value	Sand source: Rating class and limiting features	Sand source: Value
20CPF:					
Icy	45	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
Excursion	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
20ED1:					
Gustavus	75	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.36
		Thickest layer	0.00	Bottom layer	0.78
Bartlettcove	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.27
		Thickest layer	0.00	Thickest layer	0.99
20ED2:					
Beardslee	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.90
		Thickest layer	0.00	Thickest layer	0.92
Monashka	40	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.84
		Thickest layer	0.00		
20FP1:					
Drybay	70	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.63
		Thickest layer	0.00	Thickest layer	0.69
Tidalwave	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.37
		Thickest layer	0.00	Bottom layer	0.70
20FP2:					
Bertha	55	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.95
		Thickest layer	0.00		
Puffin	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.61
		Thickest layer	0.00	Thickest layer	0.74
20FP3:					
Tidalwave	60	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.37
		Thickest layer	0.00	Bottom layer	0.70
Ashmun, frequently ponded	25	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.99
		Thickest layer	0.00		
Drybay	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.63
		Thickest layer	0.00	Thickest layer	0.69

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20FPL:					
Cryaquepts	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.13
Typic Cryaquents, gravelly, very poorly drained	30	Fair		Fair	
		Bottom layer	0.65	Bottom layer	0.54
		Thickest layer	0.70	Thickest layer	0.88
Water	30	Not rated		Not rated	
20FPM:					
Typic Cryaquents, silty	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20FPY:					
Oxyaquic Cryorthents, sandy or gravelly	60	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.50
		Bottom layer	0.15	Thickest layer	0.95
Typic Cryaquents, sandy or gravelly	25	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.09
20FPZ:					
Typic Cryorthents, gravelly	60	Fair		Fair	
		Thickest layer	0.38	Bottom layer	0.50
		Bottom layer	0.70	Thickest layer	0.83
Typic Cryofluvents	30	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.76
		Bottom layer	0.00	Thickest layer	0.95
20GP1:					
Gustavus	35	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.36
		Thickest layer	0.00	Bottom layer	0.78
Ibach	35	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.07
		Bottom layer	0.55	Bottom layer	0.07
Scidmore	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.78
		Thickest layer	0.00	Thickest layer	0.95

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20HI1:					
Foad	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Boussole	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20HI2:					
Kashoto	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
		Organic matter content	0.00	Organic matter content	0.00
Foad	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kutskloh	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20HI3:					
Polkapenn	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Dagelet	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.10
Nunatak	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.10
20HI5:					
Kaknau	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.01
Tricklake	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20HIB:					
Drybay	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.63
		Thickest layer	0.00	Thickest layer	0.69
Kaknau	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.01
Vivid	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source: Rating class and limiting features	Gravel source: Value	Sand source: Rating class and limiting features	Sand source: Value
20HID:					
Grandplateau	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Crillon	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20HIE:					
Kashoto	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
		Organic matter content	0.00	Organic matter content	0.00
Kutskloh	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Wachusett	20	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
20HIF:					
Kashoto	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
		Organic matter content	0.00	Organic matter content	0.00
Wachusett	35	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
20HIN:					
Polkapenn	40	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Nunatak	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.10
20HIS:					
Lithic Cryorthents, rugged summit	46	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.05
Typic Humicryepts, high elevation	44	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.07

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20IS1:					
Cenotaph	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.11
Water, saline	35	Not rated		Not rated	
Beaches	20	Not rated		Not rated	
20LF1:					
Abyss	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.12
		Thickest layer	0.00	Thickest layer	0.56
Astrolable	30	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.54
		Bottom layer	0.45	Thickest layer	0.72
20MD1:					
Gustavus	70	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.36
		Thickest layer	0.00	Bottom layer	0.78
Perouse	20	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
20MF1:					
Geikie	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.13
		Thickest layer	0.00	Bottom layer	0.99
Gustavus	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.36
		Thickest layer	0.00	Bottom layer	0.78
Scidmore	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.78
		Thickest layer	0.00	Thickest layer	0.95
20MF2:					
Gustavus	60	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.36
		Thickest layer	0.00	Bottom layer	0.78
Geikie	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.13
		Thickest layer	0.00	Bottom layer	0.99
20MT1:					
Bearisland	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.15
		Thickest layer	0.00	Thickest layer	0.31
Kadachan	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rubble land	25	Not rated		Not rated	

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT2:					
Escures	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.06
		Thickest layer	0.00	Thickest layer	0.10
Polkapenn	25	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Nunatak	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.10
20MT3:					
Polkapenn	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Bearisland	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.15
		Thickest layer	0.00	Thickest layer	0.31
Enigma	20	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.09
20MT4:					
Seclusion	65	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.06
		Bottom layer	0.00	Thickest layer	0.10
Rock outcrop	25	Not rated		Not rated	
20MT5:					
Rock outcrop	35	Not rated		Not rated	
Seclusion	25	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.06
		Bottom layer	0.00	Thickest layer	0.10
Skarn	20	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.02
		Bottom layer	0.00	Thickest layer	0.08
20MT6:					
Bergbay	30	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.06
		Bottom layer	0.00	Thickest layer	0.08
Boussole	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Toyatte	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20MT7:					
Foad	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Abdallah	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Justicecreek	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
		Organic matter content	0.00	Organic matter content	0.00
20MTC:					
Skarn	35	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.02
		Bottom layer	0.00	Thickest layer	0.08
Polkapenn	25	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Kadachan	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20MTE:					
Wachusett	40	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Maquinna	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Boussole	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20MTF:					
Wachusett	35	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Maquinna	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Enigma	20	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.09

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
200C1:					
Scidmore	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.78
		Thickest layer	0.00	Thickest layer	0.95
Perouse, frequently ponded	35	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
200D1:					
Gustavus	45	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.36
		Thickest layer	0.00	Bottom layer	0.78
Lamplugh	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
200DF:					
Glacierbay	50	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.06
		Thickest layer	0.00	Bottom layer	0.99
Geikie	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.13
		Thickest layer	0.00	Bottom layer	0.99
200P1:					
Fossil	30	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.86
		Bottom layer	0.78	Thickest layer	0.86
Tyeen	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.09
Vivid	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
200P4:					
Kashoto	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
		Organic matter content	0.00	Organic matter content	0.00
Annoksek	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
Bulky	15	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.33
		Thickest layer	0.00	Bottom layer	0.90

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source: Rating class and limiting features	Gravel source: Value	Sand source: Rating class and limiting features	Sand source: Value
20OP5:					
Fossil	35	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.86
		Bottom layer	0.78	Thickest layer	0.86
Tyeen	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.09
Vivid	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
20OP6:					
Bulky	35	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.33
		Thickest layer	0.00	Bottom layer	0.90
Bertha	30	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.95
		Thickest layer	0.00		
Icy	15	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
20OPE:					
Tyeen	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.09
Shagcove	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.23
Puffin	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.61
		Thickest layer	0.00	Thickest layer	0.74
20OV1:					
Perouse, frequently ponded	60	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
Perouse	40	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
20OW1:					
Perouse	40	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
Gustavus	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.36
		Thickest layer	0.00	Bottom layer	0.78

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source: Rating class and limiting features	Gravel source: Value	Sand source: Rating class and limiting features	Sand source: Value
20OW1:					
Perouse, frequently ponded	20	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
20OWF:					
Fairweather	70	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.13
		Thickest layer	0.00	Bottom layer	0.67
Icy	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
20PL1:					
Tyeen	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.09
Cenotaph	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.11
Fossil	20	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.86
		Bottom layer	0.78	Thickest layer	0.86
20PL2:					
Tyeen	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.09
Fossil	30	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.86
		Bottom layer	0.78	Thickest layer	0.86
Fingers	15	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.69
		Bottom layer	0.38	Thickest layer	0.69
20PL3:					
Kashoto	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
		Organic matter content	0.00	Organic matter content	0.00
Annoksek	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
Ancon	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.07

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20PL6:					
Tidalwave	60	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.37
		Thickest layer	0.00	Bottom layer	0.70
Drybay	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.63
		Thickest layer	0.00	Thickest layer	0.69
Puffin	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.61
		Thickest layer	0.00	Thickest layer	0.74
20PLD:					
Typic Cryaquents, sandy	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.76
		Thickest layer	0.00	Thickest layer	0.99
Typic Cryorthents, sandy, rarely flooded	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.54
		Thickest layer	0.00	Thickest layer	0.96
20RW2:					
Riverwash	60	Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.50
		Bottom layer	0.15	Thickest layer	0.95
20SC:					
Beaches	60	Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.75
		Thickest layer	0.00		
20TE2:					
Tidalwave	50	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.37
		Thickest layer	0.00	Bottom layer	0.70
Drybay	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.63
		Thickest layer	0.00	Thickest layer	0.69

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20TF1:					
Water, saline	70	Not rated		Not rated	
Astrolable	15	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.54
		Bottom layer	0.45	Thickest layer	0.72
Murkbay	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.31
		Thickest layer	0.00	Thickest layer	0.99
20TF3:					
Water, saline	55	Not rated		Not rated	
Astrolable	20	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.54
		Bottom layer	0.45	Thickest layer	0.72
Beartrack	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20TH1:					
Ibach	40	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.07
		Bottom layer	0.55	Bottom layer	0.07
Lamplugh	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Bartlettcove	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.27
		Thickest layer	0.00	Thickest layer	0.99
20UL1:					
Urban land	90	Not rated		Not rated	
20UM1:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.15
		Thickest layer	0.00	Thickest layer	0.31
20UM2:					
Rock outcrop	60	Not rated		Not rated	
Bearisland	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.15
		Thickest layer	0.00	Thickest layer	0.31
20VBA:					
Typic Cryofluvents	50	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.76
		Bottom layer	0.00	Thickest layer	0.95

Table 12.—Source of Gravel and Sand—Continued

Map symbol and soil name	Pct. of map unit	Gravel source		Sand source	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20VBA:					
Aquic Dystrocryepts, silty	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20WD1:					
Perouse	35	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
Scidmore	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.78
		Thickest layer	0.00	Thickest layer	0.95
Perouse, frequently ponded	20	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		
22HIA:					
Rock outcrop, rugged summit	80	Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.05
22SM1:					
Woodlake	60	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
Flapjack	30	Fair		Fair	
		Thickest layer	0.20	Bottom layer	0.10
		Bottom layer	0.33	Thickest layer	0.12
BR:					
Rock outcrop	100	Not rated		Not rated	
GL2:					
Glaciers	95	Not rated		Not rated	
P:					
Pits	90	Not rated		Not rated	
RW:					
Riverwash	90	Not rated		Not rated	
SW:					
Water, saline	95	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil

(Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20AF1:							
Muirpoint	65	Poor		Good		Poor	
		Too sandy	0.00			Rock fragments	0.00
		Droughty	0.00			Too sandy	0.00
		Too acid	0.97			Hard to reclaim (rock fragments)	0.00
Puffin	15	Poor		Fair		Poor	
		Too sandy	0.00	Wetness	0.78	Hard to reclaim (rock fragments)	0.00
		Droughty	0.00			Rock fragments	0.00
		Low content of organic matter	0.98			Too sandy	0.00
20AF2:							
Entisols, alluvial fans, occasionally flooded	90	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.82	Too sandy	0.00
		Wind erosion	0.00			Rock fragments	0.00
		Droughty	0.00			Slope	0.00
20CL1:							
Strawberry	60	Fair		Fair		Fair	
		Too acid	0.68	Wetness	0.20	Wetness	0.20
						Exchange capacity	0.76
Fingerock	20	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.32
		Droughty	0.00				
20CP1:							
Oberlin	55	Poor		Poor		Poor	
		Droughty	0.00	Wetness	0.00	Wetness	0.00
		Too sandy	0.08			Too sandy	0.08
		Water erosion	0.68			Exchange capacity	0.65
Perouse, frequently ponded	25	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53
Perouse	15	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20CP2:							
Beaches	50	Not rated		Not rated		Not rated	
Monashka	25	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.11			Too sandy	0.00
		Too acid	0.89			Exchange capacity	0.25
Murkbay	25	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.46
		Droughty	0.00				
20CPF:							
Icy	45	Fair		Poor		Poor	
		Water erosion	0.90	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
				Dusty	0.80		
Excursion	40	Fair		Poor		Poor	
		Too acid	0.95	Wetness	0.00	Wetness	0.00
20ED1:							
Gustavus	75	Fair		Good		Poor	
		Too acid	0.03			Slope	0.00
		Too sandy	0.11			Too sandy	0.11
		Droughty	0.53			Exchange capacity	0.54
Bartlettcove	20	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Slope	0.00
		Droughty	0.46			Exchange capacity	0.44
20ED2:							
Beardslee	60	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Droughty	0.10			Exchange capacity	0.42
		Too acid	0.50				
Monashka	40	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.11			Too sandy	0.00
		Too acid	0.89			Exchange capacity	0.25
20FP1:							
Drybay	70	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim (rock fragments)	0.00
		Wind erosion	0.00			Rock fragments	0.00
		Droughty	0.00			Too sandy	0.00
Tidalwave	30	Fair		Fair		Fair	
		Droughty	0.18	Wetness	0.88	Too sandy	0.38
		Too sandy	0.38			Exchange capacity	0.46
		Too acid	0.95			Wetness	0.88
20FP2:							
Bertha	55	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.20
		Droughty	0.00			Rock fragments	0.49

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20FP2:							
Puffin	30	Poor		Fair		Poor	
		Too sandy	0.00	Wetness	0.78	Hard to reclaim (rock fragments)	0.00
		Droughty	0.00			Rock fragments	0.00
		Low content of organic matter	0.98			Too sandy	0.00
20FP3:							
Tidalwave	60	Fair		Fair		Fair	
		Droughty	0.18	Wetness	0.88	Too sandy	0.38
		Too sandy	0.38			Exchange capacity	0.46
		Too acid	0.95			Wetness	0.88
Ashmun, frequently ponded	25	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.00			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.05
Drybay	15	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim (rock fragments)	0.00
		Wind erosion	0.00			Rock fragments	0.00
		Droughty	0.00			Too sandy	0.00
20FPL:							
Cryaquepts	40	Poor		Poor		Poor	
		Droughty	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.50			Rock fragments	0.00
		Too sandy	0.88			Hard to reclaim (rock fragments)	0.00
Typic Cryaquents, gravelly, very poorly drained	30	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.00			Rock fragments	0.00
		Low content of organic matter	0.88			Too sandy	0.00
Water	30	Not rated		Not rated		Not rated	
20FPM:							
Typic Cryaquents, silty	85	Fair		Poor		Poor	
		Water erosion	0.37	Wetness	0.00	Wetness	0.00
		Too acid	0.50	Dusty	0.86	Exchange capacity	0.61
		Low content of organic matter	0.88				
20FPY:							
Oxyaquic Cryorthents, sandy or gravelly	60	Poor		Good		Poor	
		Too sandy	0.00			Rock fragments	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Hard to reclaim (rock fragments)	0.00

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20FPY:							
Typic Cryaquents, sandy or gravelly	25	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
		Low content of organic matter	0.88			Exchange capacity	0.42
		Droughty	0.99			Too sandy	0.99
20FPZ:							
Typic Cryorthents, gravelly	60	Poor		Good		Poor	
		Too sandy	0.00			Rock fragments	0.00
		Droughty	0.00			Too sandy	0.00
		Too acid	0.50			Hard to reclaim (rock fragments)	0.00
Typic Cryofluvents	30	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Droughty	0.04			Exchange capacity	0.46
		Too acid	0.50				
20GP1:							
Gustavus	35	Fair		Fair		Poor	
		Too acid	0.03	Slope	0.50	Slope	0.00
		Too sandy	0.11			Too sandy	0.11
		Droughty	0.53			Exchange capacity	0.54
Ibach	35	Poor		Poor		Poor	
		Stone content	0.00	Stones	0.00	Hard to reclaim (rock fragments)	0.00
		Droughty	0.03	Slope	0.50	Rock fragments	0.00
		Too acid	0.50			Slope	0.00
Scidmore	25	Poor		Fair		Poor	
		Too sandy	0.00	Wetness	0.22	Too sandy	0.00
		Droughty	0.00			Wetness	0.22
		Too acid	0.74			Exchange capacity	0.45
20HI1:							
Foad	65	Poor		Poor		Poor	
		Cobble content	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50	Slope	0.00	Slope	0.00
		Depth to bedrock	0.79	Cobble content	0.00	Exchange capacity	0.39
Boussole	20	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Organic matter content high	0.00
		Depth to bedrock	0.01	Slope	0.00	Slope	0.00
		Too acid	0.50	Wetness	0.07	Depth to bedrock	0.01
20HI2:							
Kashoto	35	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Organic matter content high	0.00
				Dusty	0.80	Too acid	0.14
Foad	25	Poor		Poor		Poor	
		Cobble content	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50	Cobble content	0.00	Slope	0.00
		Depth to bedrock	0.79	Slope	0.00	Exchange capacity	0.39

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HI2:							
Kutskloh	20	Poor		Poor		Poor	
		Stone content	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.50	Stones	0.00	Slope	0.00
				Slope	0.50	Rock fragments	0.00
20HI3:							
Polkapenn	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Too sandy	0.68	Cobble content	0.01	Rock fragments	0.00
Dagelet	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.08	Slope	0.00	Slope	0.00
		Too acid	0.54			Depth to bedrock	0.08
Nunatak	20	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Too acid	0.54	Depth to bedrock	0.14	Slope	0.00
		Too sandy	0.99	Cobble content	0.99	Hard to reclaim (rock fragments)	0.00
20HI5:							
Kaknau	45	Fair		Poor		Poor	
		Too acid	0.80	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.86	Slope	0.00	Exchange capacity	0.55
		Water erosion	0.90			Rock fragments	0.58
Tricklake	35	Poor		Poor		Poor	
		Wind erosion	0.00	Slope	0.00	Slope	0.00
		Too acid	0.95			Exchange capacity	0.47
		Water erosion	0.99				
20HIB:							
Drybay	35	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim (rock fragments)	0.00
		Wind erosion	0.00			Rock fragments	0.00
		Droughty	0.00			Too sandy	0.00
Kaknau	30	Fair		Poor		Poor	
		Water erosion	0.68	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.80	Slope	0.50	Exchange capacity	0.55
		Depth to bedrock	0.86			Rock fragments	0.58
Vivid	25	Fair		Poor		Poor	
		Cobble content	0.86	Wetness	0.00	Wetness	0.00
		Too acid	0.89	Cobble content	0.24	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
20HID:							
Grandplateau	55	Poor		Poor		Poor	
		Wind erosion	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.80	Slope	0.00	Slope	0.00
		Water erosion	0.90	Low strength	0.00	Hard to reclaim (rock fragments)	0.00

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HID:							
Crillon	35	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.08	Slope	0.00	Depth to bedrock	0.08
		Droughty	0.32	Wetness	0.22	Wetness	0.22
20HIE:							
Kashoto	40	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Organic matter content high	0.00
				Dusty	0.80	Too acid	0.14
Kutskloh	30	Poor		Poor		Poor	
		Stone content	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.50	Stones	0.00	Rock fragments	0.00
				Dusty	0.84	Slope	0.00
Wachusett	20	Fair		Poor		Poor	
		Too acid	0.50	Depth to bedrock	0.00	Organic matter content high	0.00
		Depth to bedrock	0.82	Slope	0.00	Slope	0.00
				Wetness	0.50	Rock fragments	0.48
20HIF:							
Kashoto	45	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Organic matter content high	0.00
				Dusty	0.80	Too acid	0.14
Wachusett	35	Fair		Poor		Poor	
		Too acid	0.50	Depth to bedrock	0.00	Organic matter content high	0.00
		Depth to bedrock	0.82	Wetness	0.50	Slope	0.00
		Water erosion	0.90	Slope	0.50	Rock fragments	0.48
20HIN:							
Polkapenn	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Too sandy	0.68	Cobble content	0.01	Rock fragments	0.00
Nunatak	30	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Too acid	0.54	Depth to bedrock	0.14	Slope	0.00
		Too sandy	0.99	Cobble content	0.99	Hard to reclaim (rock fragments)	0.00
20HIS:							
Lithic Cryorthents, rugged summit	46	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50	Wetness	0.01	Rock fragments	0.00

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20HIS:							
Typic Humicryepts, high elevation	44	Fair		Poor		Poor	
		Droughty	0.43	Slope	0.00	Slope	0.00
		Too acid	0.50	Wetness	0.76	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.05
20IS1:							
Cenotaph	35	Fair		Poor		Poor	
		Too sandy	0.99	Wetness	0.00	Wetness	0.00
		Too acid	0.99			Rock fragments	0.00
						Exchange capacity	0.92
Water, saline	35	Not rated		Not rated		Not rated	
Beaches	20	Not rated		Not rated		Not rated	
20LF1:							
Abyss	55	Poor		Poor		Poor	
		Droughty	0.00	Wetness	0.00	Wetness	0.00
		Too sandy	0.02			Too sandy	0.02
		Water erosion	0.99			Exchange capacity	0.51
Astrolable	30	Poor		Poor		Poor	
		Droughty	0.00	Wetness	0.00	Wetness	0.00
		Too sandy	0.00			Rock fragments	0.00
		Low content of organic matter	0.98			Hard to reclaim (rock fragments)	0.00
20MD1:							
Gustavus	70	Fair		Good		Fair	
		Too acid	0.03			Too sandy	0.11
		Too sandy	0.11			Exchange capacity	0.54
		Droughty	0.53			Slope	0.84
Perouse	20	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53
20MF1:							
Geikie	55	Poor		Fair		Fair	
		Too alkaline	0.00	Dusty	0.94	Exchange capacity	0.75
		Too acid	0.54				
		Water erosion	0.68				
Gustavus	30	Fair		Good		Fair	
		Too acid	0.03			Too sandy	0.11
		Too sandy	0.11			Exchange capacity	0.54
		Droughty	0.53				
Scidmore	15	Poor		Fair		Poor	
		Too sandy	0.00	Wetness	0.22	Too sandy	0.00
		Droughty	0.00			Wetness	0.22
		Too acid	0.74			Exchange capacity	0.45

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MF2:							
Gustavus	60	Fair		Good		Fair	
		Too acid	0.03			Too sandy	0.11
		Too sandy	0.11			Exchange capacity	0.54
		Droughty	0.53				
Geikie	30	Poor		Fair		Fair	
		Too alkaline	0.00	Dusty	0.94	Exchange capacity	0.75
		Too acid	0.54				
		Water erosion	0.68				
20MT1:							
Bearisland	35	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Too sandy	0.08			Slope	0.00
		Too acid	0.95			Hard to reclaim (rock fragments)	0.00
Kadachan	30	Poor		Poor		Poor	
		Too sandy	0.00	Stones	0.00	Slope	0.00
		Wind erosion	0.00	Slope	0.00	Too sandy	0.00
		Stone content	0.00	Wetness	0.65	Exchange capacity	0.08
Rubble land	25	Not rated		Not rated		Not rated	
20MT2:							
Escures	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.01	Slope	0.00	Slope	0.00
		Too acid	0.92			Depth to bedrock	0.01
Polkapenn	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Too sandy	0.68	Cobble content	0.01	Rock fragments	0.00
Nunatak	20	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Too acid	0.54	Depth to bedrock	0.14	Slope	0.00
		Too sandy	0.99	Cobble content	0.99	Hard to reclaim (rock fragments)	0.00
20MT3:							
Polkapenn	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Too sandy	0.68	Cobble content	0.01	Rock fragments	0.00
Bearisland	25	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Too sandy	0.08			Slope	0.00
		Too acid	0.95			Hard to reclaim (rock fragments)	0.00
Enigma	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Stone content	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.12	Stones	0.00	Depth to bedrock	0.12

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MT4:							
Seclusion	65	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50			Slope	0.00
Rock outcrop	25	Not rated		Not rated		Not rated	
20MT5:							
Rock outcrop	35	Not rated		Not rated		Not rated	
Seclusion	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50			Slope	0.00
Skarn	20	Fair		Poor		Poor	
		Droughty	0.12	Slope	0.00	Rock fragments	0.00
		Too acid	0.50	Depth to bedrock	0.01	Slope	0.00
						Exchange capacity	0.97
20MT6:							
Bergbay	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Stone content	0.00	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.32	Stones	0.00	Depth to bedrock	0.32
Boussole	25	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Organic matter content high	0.00
		Depth to bedrock	0.01	Slope	0.00	Slope	0.00
		Too acid	0.50	Wetness	0.07	Depth to bedrock	0.01
Toyatte	20	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Organic matter content high	0.00
		Water erosion	0.06	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50	Wetness	0.01	Slope	0.00
20MT7:							
Foad	35	Poor		Poor		Poor	
		Cobble content	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50	Slope	0.00	Slope	0.00
		Depth to bedrock	0.79	Cobble content	0.00	Exchange capacity	0.39
Abdallah	25	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Hard to reclaim (rock fragments)	0.00
		Droughty	0.00	Cobble content	0.00	Rock fragments	0.00
		Cobble content	0.00	Stones	0.00	Slope	0.00
Justicecreek	20	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Organic matter content high	0.00
		Droughty	0.20	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50	Low strength	0.00	Slope	0.00

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20MTC:							
Skarn	35	Fair		Poor		Poor	
		Droughty	0.12	Slope	0.00	Rock fragments	0.00
		Too acid	0.50	Depth to bedrock	0.01	Slope	0.00
						Exchange capacity	0.97
Polkapenn	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Too sandy	0.68	Cobble content	0.01	Rock fragments	0.00
Kadachan	20	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Wind erosion	0.00	Stones	0.00	Too sandy	0.00
		Stone content	0.00	Wetness	0.65	Exchange capacity	0.08
20MTE:							
Wachusett	40	Fair		Poor		Poor	
		Too acid	0.50	Depth to bedrock	0.00	Organic matter content high	0.00
		Depth to bedrock	0.82	Slope	0.00	Slope	0.00
		Water erosion	0.90	Wetness	0.50	Rock fragments	0.48
Maquinna	30	Fair		Poor		Poor	
		Too acid	0.50	Slope	0.00	Rock fragments	0.00
				Depth to bedrock	0.04	Slope	0.00
				Dusty	0.80	Too acid	0.51
Boussole	20	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Organic matter content high	0.00
		Depth to bedrock	0.01	Slope	0.00	Slope	0.00
		Too acid	0.50	Wetness	0.07	Depth to bedrock	0.01
20MTF:							
Wachusett	35	Fair		Poor		Poor	
		Too acid	0.50	Depth to bedrock	0.00	Organic matter content high	0.00
		Depth to bedrock	0.82	Slope	0.00	Slope	0.00
		Water erosion	0.90	Wetness	0.50	Rock fragments	0.48
Maquinna	25	Fair		Poor		Poor	
		Too acid	0.50	Slope	0.00	Rock fragments	0.00
				Depth to bedrock	0.04	Slope	0.00
				Dusty	0.80	Too acid	0.51
Enigma	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Stone content	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.12	Stones	0.00	Depth to bedrock	0.12
20OC1:							
Scidmore	55	Poor		Fair		Poor	
		Too sandy	0.00	Wetness	0.22	Too sandy	0.00
		Droughty	0.00			Wetness	0.22
		Too acid	0.74			Exchange capacity	0.45

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OC1:							
Perouse, frequently ponded	35	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53
20OD1:							
Gustavus	45	Fair		Good		Poor	
		Too acid	0.03			Slope	0.00
		Too sandy	0.11			Too sandy	0.11
		Droughty	0.53			Exchange capacity	0.54
Lamplugh	45	Fair		Poor		Poor	
		Water erosion	0.37	Wetness	0.00	Wetness	0.00
		Too acid	0.50	Low strength	0.00		
				Shrink-swell	0.99		
20ODF:							
Glacierbay	50	Fair		Poor		Poor	
		Water erosion	0.37	Wetness	0.00	Wetness	0.00
		Too acid	0.80	Dusty	0.80	Exchange capacity	0.91
		Low content of organic matter	0.98				
Geikie	30	Poor		Fair		Fair	
		Too alkaline	0.00	Dusty	0.94	Exchange capacity	0.75
		Too acid	0.54				
		Water erosion	0.68				
20OP1:							
Fossil	30	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim (rock fragments)	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Rock fragments	0.00
Tyeen	25	Fair		Good		Poor	
		Droughty	0.05			Rock fragments	0.00
		Too acid	0.89			Hard to reclaim (rock fragments)	0.08
						Slope	0.84
Vivid	20	Fair		Poor		Poor	
		Cobble content	0.86	Wetness	0.00	Wetness	0.00
		Too acid	0.89	Cobble content	0.24	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
20OP4:							
Kashoto	50	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Organic matter content high	0.00
				Dusty	0.80	Too acid	0.14
Annoksek	30	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00			Exchange capacity	0.44
		Too acid	0.50			Rock fragments	0.82

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OP4:							
Bulky	15	Fair		Poor		Poor	
		Droughty	0.24	Wetness	0.00	Wetness	0.00
		Too acid	0.50			Exchange capacity	0.53
		Too sandy	0.78			Too sandy	0.78
20OP5:							
Fossil	35	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim (rock fragments)	0.00
		Wind erosion	0.00			Slope	0.00
		Droughty	0.00			Too sandy	0.00
Tyeen	25	Fair		Fair		Poor	
		Droughty	0.05	Slope	0.50	Rock fragments	0.00
		Too acid	0.89			Slope	0.00
						Hard to reclaim (rock fragments)	0.08
Vivid	20	Fair		Poor		Poor	
		Water erosion	0.06	Wetness	0.00	Wetness	0.00
		Cobble content	0.86	Cobble content	0.24	Hard to reclaim (rock fragments)	0.00
		Too acid	0.89			Slope	0.00
20OP6:							
Bulky	35	Fair		Poor		Poor	
		Droughty	0.24	Wetness	0.00	Wetness	0.00
		Too acid	0.50			Exchange capacity	0.53
		Too sandy	0.78			Too sandy	0.78
Bertha	30	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.20
		Droughty	0.00			Rock fragments	0.49
Icy	15	Fair		Poor		Poor	
		Water erosion	0.90	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
				Dusty	0.80		
20OPE:							
Tyeen	40	Fair		Good		Poor	
		Droughty	0.05			Rock fragments	0.00
		Too acid	0.89			Hard to reclaim (rock fragments)	0.08
						Exchange capacity	0.84
Shagcove	30	Poor		Fair		Poor	
		Droughty	0.00	Wetness	0.20	Rock fragments	0.00
		Too sandy	0.24	Cobble content	0.95	Hard to reclaim (rock fragments)	0.00
		Too acid	0.92			Wetness	0.20
Puffin	20	Poor		Fair		Poor	
		Too sandy	0.00	Wetness	0.78	Hard to reclaim (rock fragments)	0.00
		Droughty	0.00			Rock fragments	0.00
		Low content of organic matter	0.98			Too sandy	0.00

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20OV1:							
Perouse, frequently ponded	60	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53
Perouse	40	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53
20OW1:							
Perouse	40	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53
Gustavus	30	Fair		Good		Fair	
		Too acid	0.03			Too sandy	0.11
		Too sandy	0.11			Exchange capacity	0.54
		Droughty	0.53				
Perouse, frequently ponded	20	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53
20OWF:							
Fairweather	70	Fair		Poor		Poor	
		Droughty	0.13	Wetness	0.00	Wetness	0.00
		Too acid	0.99	Dusty	0.94	Exchange capacity	0.69
Icy	30	Fair		Poor		Poor	
		Water erosion	0.90	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
				Dusty	0.80		
20PL1:							
Tyeen	40	Fair		Good		Poor	
		Droughty	0.05			Rock fragments	0.00
		Too acid	0.89			Hard to reclaim (rock fragments)	0.08
						Slope	0.84
Cenotaph	25	Fair		Poor		Poor	
		Too sandy	0.99	Wetness	0.00	Wetness	0.00
		Too acid	0.99			Rock fragments	0.00
						Exchange capacity	0.92
Fossil	20	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim (rock fragments)	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Rock fragments	0.00

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20PL2:							
Tyeen	35	Fair		Good		Poor	
		Droughty	0.05			Rock fragments	0.00
		Too acid	0.89			Slope	0.00
						Hard to reclaim (rock fragments)	0.08
Fossil	30	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim (rock fragments)	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Rock fragments	0.00
Fingers	15	Poor		Fair		Poor	
		Too sandy	0.00	Wetness	0.09	Hard to reclaim (rock fragments)	0.00
		Droughty	0.00			Rock fragments	0.00
		Low content of organic matter	0.98			Too sandy	0.00
20PL3:							
Kashoto	35	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Organic matter content high	0.00
				Dusty	0.80	Too acid	0.14
Annoksek	25	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.00			Exchange capacity	0.44
		Too acid	0.50			Rock fragments	0.82
Ancon	20	Fair		Fair		Poor	
		Too acid	0.50	Depth to bedrock	0.01	Slope	0.00
		Droughty	0.73	Wetness	0.29	Wetness	0.29
				Slope	0.50	Exchange capacity	0.88
20PL6:							
Tidalwave	60	Fair		Fair		Fair	
		Droughty	0.18	Wetness	0.88	Too sandy	0.38
		Too sandy	0.38			Exchange capacity	0.46
		Too acid	0.95			Wetness	0.88
Drybay	25	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim (rock fragments)	0.00
		Wind erosion	0.00			Rock fragments	0.00
		Droughty	0.00			Too sandy	0.00
Puffin	15	Poor		Fair		Poor	
		Too sandy	0.00	Wetness	0.78	Hard to reclaim (rock fragments)	0.00
		Droughty	0.00			Rock fragments	0.00
		Low content of organic matter	0.98			Too sandy	0.00
20PLD:							
Typic Cryaquents, sandy	55	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.02			Too sandy	0.00
		Too acid	0.50			Exchange capacity	0.25

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20PLD:							
Typic Cryorthents, sandy, rarely flooded	30	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.31
		Droughty	0.00			Rock fragments	0.77
20RW2:							
Riverwash	60	Not rated		Not rated		Not rated	
Oxyaquic Cryorthents, sandy or gravelly	25	Poor		Good		Poor	
		Too sandy	0.00			Rock fragments	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Hard to reclaim (rock fragments)	0.00
20SC:							
Beaches	60	Not rated		Not rated		Not rated	
Typic Cryopsamments, rarely flooded	30	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.24
		Droughty	0.00				
20TE2:							
Tidalwave	50	Fair		Fair		Fair	
		Droughty	0.18	Wetness	0.88	Too sandy	0.38
		Too sandy	0.38			Exchange capacity	0.46
		Water erosion	0.90			Wetness	0.88
Drybay	30	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim (rock fragments)	0.00
		Wind erosion	0.00				
		Droughty	0.00			Rock fragments	0.00
						Too sandy	0.00
20TF1:							
Water, saline	70	Not rated		Not rated		Not rated	
Astrolable	15	Poor		Poor		Poor	
		Droughty	0.00	Wetness	0.00	Wetness	0.00
		Too sandy	0.00			Rock fragments	0.00
		Low content of organic matter	0.98			Hard to reclaim (rock fragments)	0.00
Murkbay	15	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Exchange capacity	0.46
		Droughty	0.00				

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20TF3:							
Water, saline	55	Not rated		Not rated		Not rated	
Astrolable	20	Poor		Poor		Poor	
		Droughty	0.00	Wetness	0.00	Wetness	0.00
		Too sandy	0.00			Rock fragments	0.00
		Low content of organic matter	0.98			Hard to reclaim (rock fragments)	0.00
Beartrack	15	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
		Water erosion	0.68	Dusty	0.80	Exchange capacity	0.93
20TH1:							
Ibach	40	Poor		Poor		Poor	
		Stone content	0.00	Stones	0.00	Hard to reclaim (rock fragments)	0.00
		Droughty	0.03	Slope	0.00		
		Too acid	0.50			Rock fragments	0.00
						Slope	0.00
Lamplugh	30	Fair		Poor		Poor	
		Too acid	0.50	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
				Shrink-swell	0.99		
Bartlettcove	20	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.50	Too sandy	0.00
		Wind erosion	0.00			Slope	0.00
		Droughty	0.46			Exchange capacity	0.44
20UL1:							
Urban land	90	Not rated		Not rated		Not rated	
20UM1:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Bearisland	25	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Too sandy	0.08			Slope	0.00
		Too acid	0.95			Hard to reclaim (rock fragments)	0.00
20UM2:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Bearisland	25	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Too sandy	0.08			Hard to reclaim (rock fragments)	0.00
		Too acid	0.95				
						Slope	0.00
20VBA:							
Typic Cryofluvents	50	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Droughty	0.04			Exchange capacity	0.46
		Too acid	0.50				

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20VBA:							
Aquic Dystrocryepts, silty	30	Fair		Fair		Fair	
		Water erosion	0.06	Wetness	0.16	Wetness	0.16
		Too acid	0.50			Exchange capacity	0.62
		Low content of organic matter	0.88				
20WD1:							
Perouse	35	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53
Scidmore	35	Poor		Fair		Poor	
		Too sandy	0.00	Wetness	0.22	Too sandy	0.00
		Droughty	0.00			Wetness	0.22
		Too acid	0.74			Exchange capacity	0.45
Perouse, frequently ponded	20	Poor		Poor		Poor	
		Too sandy	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.17			Too sandy	0.00
		Low content of organic matter	0.98			Exchange capacity	0.53
22HIA:							
Rock outcrop, rugged summit	80	Not rated		Not rated		Not rated	
Lithic Cryorthents, rugged summit	15	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50	Wetness	0.01	Rock fragments	0.00
22SM1:							
Woodlake	60	Poor		Poor		Poor	
		Stone content	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.00	Stones	0.00	Rock fragments	0.00
		Depth to bedrock	0.32	Slope	0.00	Exchange capacity	0.27
Flapjack	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.16	Wetness	0.13	Wetness	0.13
		Too acid	0.50	Cobble content	0.20	Depth to bedrock	0.16
BR:							
Rock outcrop	100	Not rated		Not rated		Not rated	
GL2:							
Glaciers	95	Not rated		Not rated		Not rated	
P:							
Pits	90	Not rated		Not rated		Not rated	
RW:							
Riverwash	90	Not rated		Not rated		Not rated	

Table 13.—Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SW:							
Water, saline	95	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	

Table 14.—Engineering Properties

(Absence of an entry indicates that data were not estimated)

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20AF1:												
Muirpoint-------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-11	Gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0-6	84-94	52-85	31-54	17-32	18-23	2-6
	11-30	Very gravelly loamy coarse sand	SP-SM, SC-SM	A-1	0	4-11	66-78	29-55	15-32	5-14	19-25	1-6
	30-150	Extremely gravelly coarse sand	SP, SW-SM	A-1	0	4-13	55-79	7-56	3-27	1-8	0-20	NP-2
Puffin----------	0-70	Extremely gravelly loamy coarse sand	SP, SP-SM	A-1	0-5	0-10	52-60	12-27	5-15	2-6	0-23	NP-3
	70-150	Extremely gravelly coarse sand	SW, SP	A-1	0-5	0-10	52-57	10-27	4-13	1-4	0-22	NP-2
20AF2:												
Entisols, alluvial fans, occasionally flooded--------	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-6	Loamy very fine sand, gravelly loamy very fine sand	ML, SM	A-4, A-2	0	0-6	74-100	73-100	67-100	31-65	0-27	NP-2
	6-26	Sandy loam, fine sand, loamy sand	SM, SP-SM	A-3, A-2	0	0-7	79-100	78-100	61-100	10-32	0-21	NP-2
	26-152	Extremely gravelly sand, very gravelly coarse sand, gravelly sand, extremely gravelly coarse sand	SP, GP, SM	A-1	0	0-32	20-78	16-77	6-49	1-15	0-18	NP-2
20CL1:												
Strawberry------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-49	Sandy loam	SM	A-2, A-4	0	0	100	100	68-81	35-48	0-27	NP-3
	49-150	Fine sandy loam	SM, ML	A-4	0	0	100	100	86-95	40-51	0-36	NP-3
Fingerock-------	0-18	Fine sand	SM	A-2	0	0	100	100	91-99	14-19	0-14	NP
	18-22	Sand	SM	A-2	0	0	100	100	72-84	15-23	0-14	NP
	22-130	Sand	SM	A-2	0	0	100	100	72-84	15-23	0-14	NP
	130-150	Fine sand	SM	A-2	0	0	100	100	91-99	14-19	0-14	NP

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20CP1:												
Oberlin----------	0-3	Sandy loam	SM	A-5, A-2, A-4	0	0	100	100	71-84	33-46	0-44	NP-5
	3-18	Fine sandy loam	SM	A-4	0	0	100	100	86-95	38-49	0-33	NP-5
	18-35	Very fine sandy loam	CL-ML, SC-SM	A-4	0	0	100	100	94-100	49-58	19-27	4-6
	35-58	Loamy sand	SM	A-2	0	0	100	100	66-76	18-26	0-22	NP-2
	58-150	Coarse sand	SW-SM	A-1	0	0	100	100	44-48	8-11	0-21	NP-1
Perouse, frequently ponded---------	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SW-SM, SP, SP-SM	A-3, A-1	0	0	85-97	85-97	45-56	4-10	0-14	NP
	40-60	Sand	SW-SM, SP, SP-SM	A-3, A-1	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP, SP-SM	A-1, A-3	0	0	86-97	85-97	45-56	3-6	0-14	NP
Perouse----------	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SP-SM, SP, SW-SM	A-1, A-3	0	0	85-97	85-97	45-56	4-9	0-14	NP
	40-60	Sand	SP-SM, SP, SW-SM	A-1, A-3	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP-SM, SP	A-3, A-1	0	0	86-97	85-97	45-56	3-6	0-14	NP
20CP2:												
Beaches.												
Monashka---------	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-8	Muck	PT	A-8	0	0	---	---	---	---	---	---
	8-19	Sand	SP-SM	A-3	0	0	100	100	57-67	7-10	0-14	NP
	19-150	Sand	SP-SM	A-3	0	0	100	100	55-66	5-9	0-14	NP
Murkbay----------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Loamy sand	SM	A-2	0	0	100	100	66-79	25-35	0-14	NP
	3-25	Sand	SM, SP-SM	A-3, A-2	0	0	100	100	66-75	9-15	0-14	NP
	25-80	Sand	SP-SM, SM	A-2, A-3	0	0	100	100	66-75	9-15	0-14	NP
	80-125	Fine sand	SM	A-2	0	0	100	100	93-96	13-17	0-14	NP
	125-150	Sand	SM, SP-SM	A-3, A-2	0	0	100	100	66-75	9-15	0-14	NP
20CPF:												
Icy-------------	0-20	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	20-89	Silt loam	CL, MH	A-6, A-7	0	0	100	100	90-96	85-93	29-54	12-18
	89-119	Silt loam	MH, CL	A-6, A-7	0	0	100	100	91-99	86-93	29-54	12-18
	119-150	Loamy sand	SM	A-2	0	0	100	100	80-91	22-31	0-22	NP-2

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20CPF:												
Excursion-------	0-14	Peat	PT	A-8	0	0	---	---	---	---	---	---
	14-26	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	26-70	Loam	CL-ML, ML, CL	A-4, A-5	0	0	100	100	84-92	51-57	23-43	7-9
	70-150	Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	92-100	53-66	18-38	3-5
20ED1:												
Gustavus--------	0-12	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-33	Fine sandy loam	SM	A-4, A-2	0	0	100	100	82-88	34-38	0-22	NP-2
	33-68	Loamy sand	SM	A-2	0	0	85-100	84-100	55-68	13-20	0-22	NP-2
	68-140	Loamy sand	SM	A-2	0	0	85-100	84-100	52-64	13-19	0-22	NP-2
	140-150	Coarse sand	SP-SM, SW-SM	A-1	0	0	67-100	65-100	29-46	5-10	0-14	NP
Bartlettcove----	0-12	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-14	Loamy fine sand	SM	A-2	0	0	95-100	95-100	87-97	28-34	0-14	NP
	14-30	Loamy fine sand	SM	A-2	0	0	95-100	95-100	87-97	28-34	0-14	NP
	30-45	Loamy fine sand	SM	A-2	0	0	95-100	95-100	87-97	28-34	0-14	NP
	45-150	Fine sand	SP-SM, SM	A-2	0	0	95-100	95-100	89-95	11-14	0-14	NP
20ED2:												
Beardslee-------	0-13	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	13-21	Sandy loam	SM	A-2, A-5	0	0	100	100	63-77	30-39	0-45	NP-5
	21-48	Loamy sand	SM	A-2	0	0	100	100	63-76	17-26	0-22	NP-2
	48-150	Sand	SP-SM	A-2, A-3	0	0	100	100	62-78	6-12	0-22	NP-2
Monashka--------	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-8	Muck	PT	A-8	0	0	---	---	---	---	---	---
	8-19	Sand	SP-SM	A-3	0	0	100	100	57-67	7-10	0-14	NP
	19-150	Sand	SP-SM	A-3	0	0	100	100	55-66	5-9	0-14	NP
20FP1:												
Drybay----------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-11	Silt loam	ML, OL	A-4, A-5	0	0	100	100	82-91	57-66	0-45	NP-5
	11-24	Very gravelly coarse sandy loam	SM, SP-SM	A-1	0	0-5	72-86	27-52	16-34	9-21	0-38	NP-5
	24-60	Extremely gravelly coarse sand	SP, SW	A-1	0	5-15	69-75	12-32	4-14	1-2	0-14	NP
	60-150	Extremely gravelly coarse sand	SW	A-1	0	11-15	69-77	12-34	4-15	1-3	0-14	NP

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20FP1:												
Tidalwave-------	0-4	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-16	Very fine sandy loam	ML, OL	A-5, A-4	0	0	100	100	98-100	61-63	0-41	NP-2
	16-24	Fine sandy loam	SM	A-4	0	0	100	100	87-90	46-50	0-30	NP-2
	24-49	Sandy loam	SM	A-4	0	0	100	100	75-83	42-46	0-25	NP-2
	49-150	Gravelly coarse sand	SW-SM, SP-SM	A-1	0	0-6	81-97	56-93	25-43	5-10	0-14	NP
20FP2:												
Bertha----------	0-3	Gravelly slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-13	Coarse sand	SW-SM, SP-SM, SP	A-1	0	0	86-97	85-97	33-42	4-8	0-14	NP
	13-22	Extremely gravelly coarse sand	GP, GW	A-1	0	0	10-32	7-30	3-15	0-3	0-14	NP
	22-150	Coarse sand	SP, SP-SM	A-1	0	0	82-93	81-92	32-40	3-8	0-14	NP
Puffin----------	0-70	Extremely gravelly loamy coarse sand	SP-SM, SP	A-1	0-5	0-10	52-60	12-27	5-15	2-6	0-23	NP-3
	70-150	Extremely gravelly coarse sand	SW, SP	A-1	0-5	0-10	52-57	10-27	4-13	1-4	0-22	NP-2
20FP3:												
Tidalwave-------	0-4	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-16	Very fine sandy loam	ML, OL	A-5, A-4	0	0	100	100	98-100	61-63	0-41	NP-2
	16-24	Fine sandy loam	SM	A-4	0	0	100	100	87-90	46-50	0-30	NP-2
	24-49	Sandy loam	SM	A-4	0	0	100	100	75-83	42-46	0-25	NP-2
	49-150	Gravelly coarse sand	SP-SM, SW-SM	A-1	0	0-6	81-97	56-93	25-43	5-10	0-14	NP
Ashmun, frequently ponded---------	0-1	Muck	PT	A-8	0	0	---	---	---	---	---	---
	1-15	Coarse sand	SP	A-1	0	0	97-99	79-85	30-36	2-4	0-14	NP
	15-150	Gravelly coarse sand	SP, SW	A-1	0	0	93-97	65-78	25-33	2-3	0-14	NP
Drybay----------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-11	Silt loam	OL, ML	A-4, A-5	0	0	100	100	82-91	57-66	0-45	NP-5
	11-24	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	0-5	72-86	27-52	16-34	9-21	0-38	NP-5
	24-60	Extremely gravelly coarse sand	SW, SP	A-1	0	5-15	69-75	12-32	4-14	1-2	0-14	NP
	60-150	Extremely gravelly coarse sand	SW	A-1	0	11-15	69-77	12-34	4-15	1-3	0-14	NP

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20FPL:												
Cryaquepts------	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-15	Gravelly loam, loam	SM, OH	A-7, A-4, A-1	0	0-9	69-88	38-82	31-76	21-57	36-51	3-13
	15-28	Gravelly sandy loam, gravelly loam, very gravelly sand	SC, SP-SM, ML	A-1, A-7, A-2	0	0-7	57-75	27-75	20-75	12-52	0-43	NP-13
	28-152	Stratified very gravelly sand to sandy loam	SM, SP-SM	A-1	0	0-7	62-68	31-54	22-48	7-20	0-23	NP-2
Typic Cryaquents, gravelly, very poorly drained-	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-8	Muck	PT	A-8	0	0	---	---	---	---	---	---
	8-16	Coarse sandy loam, gravelly coarse sandy loam	SC-SM, GM	A-4, A-1	0	0	54-100	52-100	30-72	17-48	0-25	NP-6
	16-38	Very gravelly coarse sand, extremely gravelly coarse sand	GP-GM, GP, GW	A-1	0	0-20	11-56	7-54	3-31	1-10	0-21	NP-2
	38-152	Very gravelly coarse sand, extremely gravelly coarse sand	GP-GM, GW, GP	A-1	0	0-20	11-56	7-54	3-31	1-10	0-21	NP-2
Water.												
20FPM:												
Typic Cryaquents, silty----------	0-3	Peat	PT	A-8	0	0	---	---	---	---	---	---
	3-7	Muck	PT	A-8	0	0	---	---	---	---	---	---
	7-9	Very fine sandy loam, silt loam, loam	OH, ML	A-7, A-4	0	0	100	100	85-100	62-100	0-52	NP-13
	9-19	Very fine sandy loam, silt loam, very fine sand	SM, CL-ML, CL	A-4, A-6	0	0	84-100	84-100	67-100	45-100	0-30	NP-13
	19-29	Silt loam, very fine sand, very fine sandy loam	CL-ML, SM, CL	A-6, A-4	0	0	84-100	84-100	67-100	45-100	0-30	NP-13
	29-152	Loamy very fine sand, silt loam, very fine sand	SM, CL, CL-ML	A-4, A-6	0	0	84-100	84-100	67-100	45-100	0-30	NP-13

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20FPY: Oxyaquic Cryorthents, sandy or gravelly-------	0-8	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-15	Very gravelly sand, gravelly sandy loam, very gravelly loamy sand, gravelly sand, gravelly loamy sand	GP, GM, SP-SM	A-1, A-2	0	0-18	40-63	38-62	24-59	2-19	0-43	NP-5
	15-38	Gravelly coarse sand, extremely gravelly coarse sand, very gravelly coarse sand, gravelly loamy sand, extremely gravelly sand	GM, GP, SP-SM	A-1	0	0	20-60	17-58	6-40	1-16	0-21	NP-2
	38-152	Very gravelly sand, very gravelly coarse sand, extremely gravelly sand, gravelly loamy sand, extremely gravelly coarse sand	GP, GM, GP-GM	A-1	0	0-53	14-60	11-58	4-40	1-16	0-21	NP-2
Typic Cryaquents, sandy or gravelly-------	0-5	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	5-13	Sandy loam, silt loam, sand, loamy sand, fine sandy loam	ML, SM	A-7, A-2, A-4	0	0	100	100	67-100	30-79	0-47	NP-13
	13-43	Extremely gravelly sand, loamy sand, silt loam, gravelly loamy sand, silty clay loam	CH, SM, GP	A-1, A-7, A-2	0	0	13-100	10-100	6-100	1-74	0-54	NP-29
	43-75	Extremely gravelly sand, stratified fine sandy loam to loamy fine sand, sand, gravelly loamy sand, silty clay loam	CH, SM, GP	A-7, A-1, A-2	0	0	13-100	10-100	7-100	2-79	0-54	NP-29
	75-152	Silty clay loam, sand, extremely gravelly sand, gravelly loamy sand, very fine sandy loam	CH, GP, ML	A-1, A-7, A-4	0	0	13-100	10-100	8-100	3-93	0-54	NP-29

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20FPZ: Typic Cryorthents, gravelly-------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-8	Gravelly loamy sand, very gravelly sand, gravelly sand, very gravelly loamy sand, gravelly sandy loam	GM, GP-GM	A-1, A-4	0	0	38-76	35-75	23-75	10-44	0-38	NP-5
	8-20	Very gravelly sand, extremely gravelly loamy sand, very gravelly loamy sand, extremely gravelly sand	GC-GM, GP, GP-GC	A-1, A-2	0	0-31	15-55	11-53	8-52	2-21	0-25	NP-6
	20-30	Extremely gravelly coarse sand, very gravelly loamy sand, extremely gravelly sand, very gravelly sand	GP-GM, GP	A-1	0	0-31	15-56	12-54	4-34	1-10	0-21	NP-2
	30-152	Extremely gravelly coarse sand, extremely gravelly sand, very gravelly sand, very gravelly loamy sand	GP-GM, GP	A-1	0	0-31	15-56	12-54	4-34	1-10	0-21	NP-2

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20FPZ:												
Typic Cryofluvents---	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-13	Gravelly loamy sand, silt loam, sandy loam, extremely gravelly sand, sand	SC, GP-GM, ML	A-4, A-7, A-1	0-11	0-79	30-100	28-100	17-100	8-79	0-43	NP-13
	13-18	Loamy sand, gravelly loamy sand, very gravelly sand, extremely gravelly sand, sand	GP, SM	A-1, A-2, A-4	0-10	0-42	13-100	10-100	6-94	1-36	0-21	NP-2
	18-23	Silt loam, extremely gravelly sand, sand, gravelly loamy sand, sandy loam	GP-GM, ML, SC	A-4, A-1, A-7	0-10	0-75	22-100	19-100	12-100	5-79	0-43	NP-13
	23-31	Gravelly loamy sand, sand, silt loam, loamy sand, extremely gravelly sand	ML, GP, SM	A-2, A-1, A-6	0-10	0-74	23-100	20-100	12-100	3-59	0-39	NP-13
	31-36	Gravelly loamy sand, very gravelly sand, loamy sand, sand, extremely gravelly sand	SP-SM, GP, SM	A-2, A-1, A-3	0-10	0-42	13-100	10-100	6-91	0-25	0-21	NP-2
	36-49	Sand, gravelly loamy sand, loamy sand, extremely gravelly sand, silt loam	GP, SM, ML	A-1, A-7, A-2	0-10	0-75	22-100	19-100	11-100	3-59	0-43	NP-13
	49-152	Sand, extremely gravelly sand, very gravelly sand, loamy sand, gravelly loamy sand	SP-SM, GP, SM	A-3, A-2, A-1	0-10	0-42	13-100	10-100	6-91	0-25	0-21	NP-2
20GP1:												
Gustavus--------	0-12	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-33	Fine sandy loam	SM	A-4, A-2	0	0	100	100	82-88	34-38	0-22	NP-2
	33-68	Loamy sand	SM	A-2	0	0	85-100	84-100	55-68	13-20	0-22	NP-2
	68-140	Loamy sand	SM	A-2	0	0	85-100	84-100	52-64	13-19	0-22	NP-2
	140-150	Coarse sand	SW-SM, SP-SM	A-1	0	0	67-100	65-100	29-46	5-10	0-14	NP

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20GP1:												
Ibach-----------	0-9	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	9-27	Bouldery silt loam	ML, GM	A-4	9-53	0-26	65-93	64-93	56-90	46-77	0-39	NP-4
	27-56	Extremely bouldery sandy loam	GP-GM, SM	A-1, A-2	52-89	0-15	32-87	29-86	19-62	10-33	0-36	NP-4
	56-73	Extremely gravelly sandy loam	GP-GM, GP	A-1	0-5	6-16	15-28	11-25	7-19	4-11	0-32	NP-4
	73-150	Extremely gravelly sandy loam	GP-GC, GP-GM	A-1, A-2	0-5	6-22	22-30	18-27	12-21	6-12	0-33	NP-9
Scidmore--------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-9	Sandy loam	SM	A-5, A-2	0	0	92-100	84-100	59-74	28-39	0-43	NP-4
	9-31	Loamy sand	SM	A-2	0	0	93-100	85-100	65-85	15-24	0-22	NP-2
	31-50	Sand	SP-SM	A-2, A-3	0	0	89-100	77-100	58-82	6-13	0-22	NP-2
	50-150	Coarse sand	SP-SM, SW-SM	A-1	0	0	88-98	69-92	30-45	5-10	0-22	NP-2
20HI1:												
Foad------------	0-5	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	5-10	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-15	Very cobbly silt loam	GM, OL, ML	A-5, A-4	0	52-67	64-95	63-95	54-86	44-72	29-43	2-5
	15-84	Very cobbly silt loam	OL, GM, ML	A-5, A-4	0	58-70	58-89	57-89	49-81	40-69	29-43	2-5
	84-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Boussole--------	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-28	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	28-41	Silt loam	OL, ML	A-4, A-5	0	0	100	100	85-93	57-63	20-43	1-4
	41-51	Gravelly sandy loam	SM	A-4, A-2	0	0	86-96	58-76	41-59	28-41	18-40	1-4
	51-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20HI2:												
Kashoto---------	0-18	Peat	PT	A-8	0	0	---	---	---	---	---	---
	18-56	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	56-150	Muck	PT	A-8	0	0	---	---	---	---	---	---
Foad------------	0-5	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	5-10	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-15	Very cobbly silt loam	ML, OL, GM	A-5, A-4	0	52-67	64-95	63-95	54-86	44-72	29-43	2-5
	15-84	Very cobbly silt loam	OL, ML, GM	A-5, A-4	0	58-70	58-89	57-89	49-81	40-69	29-42	2-5
	84-200	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20HI2:												
Kutskloh--------	0-9	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	9-21	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	21-30	Gravelly silt loam	OL, ML, GM	A-5, A-4	0	0	67-80	66-79	57-76	48-67	0-47	NP-9
	30-150	Extremely stony silt loam	GM, OL	A-1, A-4, A-5	56-76	0-10	23-74	20-73	18-70	15-62	0-47	NP-9
20HI3:												
Polkapenn-------	0-10	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-22	Extremely cobbly coarse sandy loam	SM, GM	A-1	0	4-52	48-77	46-76	26-46	13-24	20-37	1-2
	22-42	Very cobbly coarse sandy loam	GP-GM, SM	A-1	0	8-47	47-76	45-75	26-46	12-24	20-37	1-3
	42-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Dagelet---------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-8	Gravelly sandy loam	SM	A-1, A-2	0	0-7	80-93	53-78	38-66	19-35	0-39	NP-4
	8-37	Very gravelly coarse sandy loam	SM, SP-SM	A-2, A-1	0	0-10	73-90	37-78	21-51	11-30	0-37	NP-4
	37-60	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	0-11	77-83	28-54	16-34	8-19	0-36	NP-4
	60-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Nunatak---------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-10	Gravelly sandy loam	SM	A-5, A-2, A-1	0	5-19	90-98	50-84	39-72	19-37	21-41	3-5
	10-36	Very gravelly coarse sandy loam	SM, SP-SM	A-1	0	4-8	62-77	23-54	14-36	8-21	17-34	2-5
	36-113	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	14-29	63-82	23-62	13-40	7-23	17-38	2-5
	113-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20HI5:												
Kaknau----------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-12	Very fine sandy loam	ML, OL	A-5, A-4	0	0	100	100	95-100	53-60	0-41	NP-2
	12-40	Cobbly very fine sandy loam	ML	A-4	0	23-47	100	100	95-100	53-60	0-30	NP-2
	40-87	Silt loam	ML	A-4	0	0	100	100	81-91	59-67	16-27	1-3
	87-200	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20HI5:												
Tricklake-------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-22	Silt loam	OL, ML	A-5, A-4	0	0	100	100	86-94	63-72	0-43	NP-4
	22-56	Fine sandy loam	ML	A-4	0	0	100	100	83-89	56-60	0-30	NP-2
	56-150	Fine sandy loam	ML	A-4	0	0	100	100	81-89	52-59	0-14	NP
20HIB:												
Drybay----------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-11	Silt loam	OL, ML	A-4, A-5	0	0	100	100	82-91	57-66	0-45	NP-5
	11-24	Very gravelly coarse sandy loam	SM, SP-SM	A-1	0	0-5	72-86	27-52	16-34	9-21	0-38	NP-5
	24-60	Extremely gravelly coarse sand	SP, SW	A-1	0	5-15	69-75	12-32	4-14	1-2	0-14	NP
	60-150	Extremely gravelly coarse sand	SW	A-1	0	11-15	69-77	12-34	4-15	1-3	0-14	NP
Kaknau----------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-12	Very fine sandy loam	ML, OL	A-4, A-5	0	0	100	100	95-100	53-60	0-41	NP-2
	12-40	Cobbly very fine sandy loam	ML	A-4	0	23-47	100	100	95-100	53-60	0-30	NP-2
	40-87	Silt loam	ML	A-4	0	0	100	100	81-91	59-67	16-27	1-3
	87-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Vivid-----------	0-8	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-28	Silt	ML	A-4	0	0	100	100	98-100	95-100	17-40	2-7
	28-150	Very cobbly sandy loam	GM, SM, SC-SM	A-2, A-1	0	28-65	56-83	55-82	39-67	16-32	17-41	2-8
20HID:												
Grandplateau----	0-2	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-18	Medial very fine sandy loam	MH, OH	A-5	0	0	100	100	94-100	54-60	50-60	NP-5
	18-27	Medial silt loam	MH, ML, OH	A-5	0	0	100	100	85-96	75-91	45-70	5-10
	27-43	Medial silt loam	MH, OH, ML	A-5	0	0	100	100	85-96	75-91	45-70	5-10
	43-120	Medial silt loam	OH, MH, ML	A-5	0-12	5-33	85-99	85-99	72-95	63-83	45-70	5-10
	120-130	Extremely cobbly silt loam	GM, ML, OL	A-4, A-5	8-34	24-62	58-83	57-83	48-79	43-69	20-44	2-7
	130-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Crillon---------	0-10	Silt loam	OL, ML	A-4, A-5	0	0	100	100	84-96	63-76	0-45	NP-5
	10-20	Sandy loam	ML, SM	A-4	0	0	100	100	74-77	45-55	0-30	NP-2
	20-60	Silt loam	ML	A-4	0	0	100	100	86-97	69-78	0-25	NP-2
	60-80	Bedrock	---	---	---	---	---	---	---	---	---	---
	80-200	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20HIE:												
Kashoto---------	0-18	Peat	PT	A-8	0	0	---	---	---	---	---	---
	18-56	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	56-150	Muck	PT	A-8	0	0	---	---	---	---	---	---
Kutskloh--------	0-9	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	9-21	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	21-30	Gravelly silt loam	ML, OL, GM	A-5, A-4	0	0	67-80	66-79	57-76	48-67	0-47	NP-9
	30-150	Extremely stony silt loam	OL, GM	A-4, A-5, A-1	56-76	0-10	23-74	20-73	18-70	15-62	0-47	NP-9
Wachusett-------	0-23	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	23-34	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	34-41	Silt loam	ML, OL	A-4, A-5	0	0	100	100	87-99	70-83	20-43	1-6
	41-60	Channery silt loam	ML, MH, GM	A-7, A-4	0	15-22	71-82	71-82	59-81	45-66	20-54	2-17
	60-80	Channery loam	GM, SC-SM, ML	A-2, A-4	0	12-25	67-86	66-86	50-74	35-52	18-31	3-7
	80-85	Channery sandy loam	SM	A-4, A-2	0	11-23	69-87	69-87	52-74	27-38	16-30	2-6
	85-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20HIF:												
Kashoto---------	0-18	Peat	PT	A-8	0	0	---	---	---	---	---	---
	18-56	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	56-150	Muck	PT	A-8	0	0	---	---	---	---	---	---
Wachusett-------	0-23	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	23-34	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	34-41	Silt loam	OL, ML	A-4, A-5	0	0	100	100	87-99	70-83	20-43	1-6
	41-60	Channery silt loam	ML, MH, GM	A-7, A-4	0	15-22	71-82	71-82	59-81	45-66	20-54	2-17
	60-80	Channery loam	SC-SM, GM, ML	A-4, A-2	0	12-25	67-86	66-86	50-74	35-52	18-31	3-7
	80-85	Channery sandy loam	SM	A-4, A-2	0	11-23	69-87	69-87	52-74	27-38	16-30	2-6
	85-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20HIN:												
Polkapenn-------	0-10	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-22	Extremely cobbly coarse sandy loam	GM, SM	A-1	0	4-52	48-77	46-76	26-46	13-24	20-37	1-2
	22-42	Very cobbly coarse sandy loam	GP-GM, SM	A-1	0	8-47	47-76	45-75	26-46	12-24	20-37	1-3
	42-200	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20HIN:												
Nunatak---------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-10	Gravelly sandy loam	SM	A-1, A-2, A-5	0	5-19	90-98	50-84	39-72	19-37	21-41	3-5
	10-36	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	4-8	62-77	23-54	14-36	8-21	17-34	2-5
	36-113	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	14-29	63-82	23-62	13-40	7-23	17-38	2-5
	113-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20HIS:												
Lithic Cryorthents, rugged summit--	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-6	Loam, gravelly loam, very gravelly loam	OH, SM	A-7, A-5, A-1	0	0-8	78-100	34-100	27-92	18-70	29-52	3-13
	6-36	Gravelly loam, very cobbly sandy loam, gravelly sandy loam	SM, CL	A-2, A-6, A-1	0	22-30	75-90	41-90	27-78	14-53	0-36	NP-13
	36-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Typic Humicryepts, high elevation-	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-28	Very gravelly sandy loam	GM	A-1, A-2	0	0-7	52-62	38-62	27-51	14-31	0-43	NP-5
	28-35	Gravelly loamy sand, very gravelly loam, gravelly silt loam	GC, ML, GM	A-7, A-2, A-1	0	4-12	57-67	35-67	25-67	15-52	0-43	NP-13
	35-51	Very gravelly loamy sand, gravelly sandy loam, gravelly silt loam	GP-GM, GC, SC	A-2, A-6, A-1	0	7-18	54-68	38-68	24-65	9-38	0-36	NP-13
	51-152	Gravelly loamy sand, very gravelly sandy loam, gravelly silt loam	GM, GC	A-6, A-2, A-1	0	13-18	55-75	40-75	26-72	13-50	0-34	NP-13
20IS1:												
Cenotaph--------	0-17	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	17-25	Gravelly fine sandy loam	GC-GM, SM	A-2, A-1	0	0-14	55-78	53-77	46-71	21-32	25-42	6-7
	25-100	Gravelly fine sandy loam	GC-GM, SM, SC-SM	A-2, A-1	0	0-13	58-80	56-79	48-77	22-34	20-40	4-7
	100-150	Gravelly loamy fine sand	GM, SM	A-2, A-1	0	0	54-78	53-77	50-76	17-31	0-24	NP-3

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20IS1:												
Water, saline.												
Beaches.												
20LF1:												
Abyss-----------	0-13	Loam	CL, ML	A-4, A-7	0	0	100	100	80-94	57-69	24-47	8-13
	13-30	Sand	SM	A-2	0	0	100	100	66-75	14-20	0-34	NP-2
	30-150	Sand	SM	A-2	0	0	100	100	66-75	14-20	0-34	NP-2
Astrolable------	0-25	Sandy clay loam	SC	A-7, A-2	0	0	82-93	81-92	59-80	24-37	33-44	16-21
	25-150	Extremely gravelly coarse sand	GP-GM, GP	A-1	0	0	32-55	29-54	12-26	3-8	0-22	NP-2
20MD1:												
Gustavus--------	0-12	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-33	Fine sandy loam	SM	A-2, A-4	0	0	100	100	82-88	34-38	0-22	NP-2
	33-68	Loamy sand	SM	A-2	0	0	85-100	84-100	55-68	13-20	0-22	NP-2
	68-140	Loamy sand	SM	A-2	0	0	85-100	84-100	52-64	13-19	0-22	NP-2
	140-150	Coarse sand	SW-SM, SP-SM	A-1	0	0	67-100	65-100	29-46	5-10	0-14	NP
Perouse---------	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SP-SM, SP, SW-SM	A-1, A-3	0	0	85-97	85-97	45-56	4-9	0-14	NP
	40-60	Sand	SW-SM, SP, SP-SM	A-3, A-1	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP-SM, SP	A-1, A-3	0	0	86-97	85-97	45-56	3-6	0-14	NP
20MF1:												
Geikie----------	0-7	Loam	CL-ML	A-4	0	0	100	100	90-98	57-64	19-29	4-7
	7-32	Loam	CL, CL-ML	A-4	0	0	100	100	87-94	61-68	19-32	4-9
	32-48	Silt loam	ML, CL-ML, CL	A-7, A-4	0	0	100	100	93-100	82-92	23-47	7-13
	48-120	Sand	SP-SM	A-3	0	0	85-100	85-100	53-69	5-10	0-14	NP
	120-150	Gravelly sand	SP-SM, SP	A-3, A-1	0	0	56-79	54-78	33-52	2-6	0-14	NP
Gustavus--------	0-12	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-33	Fine sandy loam	SM	A-4, A-2	0	0	100	100	82-88	34-38	0-22	NP-2
	33-68	Loamy sand	SM	A-2	0	0	85-100	84-100	55-68	13-20	0-22	NP-2
	68-140	Loamy sand	SM	A-2	0	0	85-100	84-100	52-64	13-19	0-22	NP-2
	140-150	Coarse sand	SW-SM, SP-SM	A-1	0	0	67-100	65-100	29-46	5-10	0-14	NP

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20MF1:												
Scidmore--------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-9	Sandy loam	SM	A-2, A-5	0	0	92-100	84-100	59-74	28-39	0-43	NP-4
	9-31	Loamy sand	SM	A-2	0	0	93-100	85-100	65-85	15-24	0-22	NP-2
	31-50	Sand	SP-SM	A-3, A-2	0	0	89-96	77-92	58-76	6-12	0-22	NP-2
	50-150	Coarse sand	SP-SM, SW-SM	A-1	0	0	88-98	69-92	30-45	5-10	0-22	NP-2
20MF2:												
Gustavus--------	0-12	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-33	Fine sandy loam	SM	A-4, A-2	0	0	100	100	82-88	34-38	0-22	NP-2
	33-68	Loamy sand	SM	A-2	0	0	85-100	84-100	55-68	13-20	0-22	NP-2
	68-140	Loamy sand	SM	A-2	0	0	85-100	84-100	52-64	13-19	0-22	NP-2
	140-150	Coarse sand	SP-SM, SW-SM	A-1	0	0	67-100	65-100	29-46	5-10	0-14	NP
Geikie----------	0-7	Loam	CL-ML	A-4	0	0	100	100	90-98	57-64	19-29	4-7
	7-32	Loam	CL-ML, CL	A-4	0	0	100	100	87-94	61-68	19-32	4-9
	32-48	Silt loam	CL, CL-ML, ML	A-4, A-7	0	0	100	100	93-100	82-92	23-47	7-13
	48-120	Sand	SP-SM	A-3	0	0	85-100	85-100	53-69	5-10	0-14	NP
	120-150	Gravelly sand	SP, SP-SM	A-3, A-1	0	0	56-79	54-78	33-52	2-6	0-14	NP
20MT1:												
Bearisland------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-24	Very gravelly loamy coarse sand	SP-SM, SW-SC, SC-SM	A-1	0	4-11	64-76	31-56	15-36	5-15	16-26	2-6
	24-150	Very gravelly loamy coarse sand	SP-SC, SP, SC-SM	A-1, A-2	0	0-11	62-72	28-56	13-34	4-14	19-28	4-7
Kadachan--------	0-11	Fine sand	SM	A-2	0	0	100	100	93-97	18-22	0-22	NP-2
	11-18	Very stony fine sand	SM	A-2	28-52	7-35	100	100	93-97	18-22	0-22	NP-2
	18-150	Extremely bouldery fine sand, boulders	SM, GP	A-1, A-2	79-92	0-10	44-100	41-100	38-97	7-22	0-22	NP-2
Rubble land.												
20MT2:												
Escures---------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-10	Gravelly coarse sandy loam	SM	A-1, A-2	0	0-13	73-90	43-79	27-55	15-35	16-38	1-5
	10-25	Very gravelly coarse sandy loam	SM, GW-GM	A-1	0	4-8	55-70	36-56	21-37	11-22	16-38	1-5
	25-54	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	6-8	65-79	28-56	16-37	9-22	16-38	1-5
	54-200	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20MT2:												
Polkapenn-------	0-10	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-22	Extremely cobbly coarse sandy loam	GM, SM	A-1	0	4-52	48-77	46-76	26-46	13-24	20-37	1-2
	22-42	Very cobbly coarse sandy loam	SM, GP-GM	A-1	0	8-47	47-76	45-75	26-46	12-24	20-37	1-3
	42-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Nunatak---------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-10	Gravelly sandy loam	SM	A-2, A-5, A-1	0	5-19	90-98	50-84	39-72	19-37	21-41	3-5
	10-36	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	4-8	62-77	23-54	14-36	8-21	17-34	2-5
	36-113	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	14-29	63-82	23-62	13-40	7-23	17-38	2-5
	113-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20MT3:												
Polkapenn-------	0-10	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-22	Extremely cobbly coarse sandy loam	SM, GM	A-1	0	4-52	48-77	46-76	26-46	13-24	20-37	1-2
	22-42	Very cobbly coarse sandy loam	SM, GP-GM	A-1	0	8-47	47-76	45-75	26-46	12-24	20-37	1-3
	42-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Bearisland------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-24	Very gravelly loamy coarse sand	SW-SC, SP-SM, SC-SM	A-1	0	4-11	64-76	31-56	15-36	5-15	16-26	2-6
	24-150	Very gravelly loamy coarse sand	SP, SP-SC, SC-SM	A-2, A-1	0	0-11	62-72	28-56	13-34	4-13	19-28	4-7
Enigma----------	0-10	Very cobbly sandy loam	SM, GM	A-2, A-1	0	8-58	42-73	40-72	29-56	14-29	20-41	2-5
	10-62	Extremely stony coarse sandy loam	GM, GP-GM	A-1	15-52	0-26	18-50	15-48	9-33	5-25	0-36	NP-4
	62-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20MT4:												
Seclusion-------	0-9	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	9-15	Very gravelly sandy loam	GP-GM, GM	A-1	0	7-30	35-59	33-58	23-44	12-24	18-43	2-5
	15-40	Very gravelly sandy loam	GM, GP-GM	A-1	0	6-23	37-58	34-56	24-41	12-21	17-37	2-4
	40-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20MT5:												
Rock outcrop.												
Seclusion-------	0-9	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	9-15	Very gravelly sandy loam	GP-GM, GM	A-1	0	7-30	35-59	33-58	23-44	12-24	18-43	2-5
	15-40	Very gravelly sandy loam	GP-GM, GM	A-1	0	6-23	37-58	34-56	24-41	12-21	17-37	2-4
	40-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Skarn-----------	0-8	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-14	Gravelly sandy loam	GM, SM, GC	A-2	0	0	51-76	49-75	36-64	18-32	29-47	9-11
	14-60	Very gravelly sandy clay loam	GC, GM	A-2	0	0-9	37-53	34-52	27-45	14-22	31-41	13-14
	60-104	Very gravelly sandy clay loam	GC, GM	A-2	0	0-9	37-54	34-52	28-47	14-23	31-42	13-14
	104-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20MT6:												
Bergbay---------	0-8	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-37	Stony sandy loam	SM	A-2, A-1, A-5	9-29	0-21	64-90	63-90	48-78	25-43	20-41	1-4
	37-70	Extremely stony coarse sandy loam	GP-GM, SM, GM	A-2, A-1	7-28	7-34	40-73	38-72	22-46	12-27	15-28	1-4
	70-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Boussole--------	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-28	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	28-41	Silt loam	ML, OL	A-4, A-5	0	0	100	100	85-93	57-63	20-43	1-4
	41-51	Gravelly sandy loam	SM	A-4, A-2	0	0	86-96	58-76	41-59	28-41	18-40	1-4
	51-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Toyatte---------	0-16	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	16-32	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	32-42	Silt loam	ML	A-4	0	0	92-99	80-97	73-97	58-79	17-39	2-6
	42-200	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20MT7:												
Foad------------	0-5	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	5-10	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-15	Very cobbly silt loam	OL, GM, ML	A-5, A-4	0	52-67	64-95	63-95	54-86	44-72	29-43	2-5
	15-84	Very cobbly silt loam	OL, ML, GM	A-5, A-4	0	58-70	58-89	57-89	49-81	40-69	29-42	2-5
	84-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Abdallah--------	0-3	Cobbly slightly decomposed plant material	PT	A-8	0	54-69	---	---	---	---	---	---
	3-20	Extremely cobbly sandy loam	SM, GM	A-4, A-1, A-2	0	65-73	58-87	57-86	39-66	20-36	0-38	NP-3
	20-150	Extremely cobbly sandy loam	SM, GM	A-4, A-1	23-32	47-53	50-100	48-100	32-77	16-40	0-36	NP-3
Justicecreek----	0-11	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	11-22	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	22-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20MTC:												
Skarn-----------	0-8	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-14	Gravelly sandy loam	GM, SM, GC	A-2	0	0	51-76	49-75	36-64	18-32	29-47	9-11
	14-60	Very gravelly sandy clay loam	GC, GM	A-2	0	0-9	37-53	34-52	27-45	14-22	31-41	13-14
	60-104	Very gravelly sandy clay loam	GC, GM	A-2	0	0-9	37-54	34-52	28-47	14-23	31-42	13-14
	104-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Polkapenn-------	0-10	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-22	Extremely cobbly coarse sandy loam	GM, SM	A-1	0	4-52	48-77	46-76	26-46	13-24	20-37	1-2
	22-42	Very cobbly coarse sandy loam	GP-GM, SM	A-1	0	8-47	47-76	45-75	26-46	12-24	20-37	1-3
	42-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Kadachan--------	0-11	Fine sand	SM	A-2	0	0	100	100	93-97	18-22	0-22	NP-2
	11-18	Very stony fine sand	SM	A-2	28-52	7-35	100	100	93-97	18-22	0-22	NP-2
	18-150	Boulders, extremely bouldery fine sand	SM, GP	A-2, A-1	79-92	0-10	44-100	41-100	38-97	7-22	0-22	NP-2

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20MTE:												
Wachusett-------	0-23	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	23-34	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	34-41	Silt loam	ML, OL	A-4, A-5	0	0	100	100	87-99	70-83	20-43	1-6
	41-60	Channery silt loam	MH, ML, GM	A-7, A-4	0	15-22	71-82	71-82	59-81	45-66	20-54	2-17
	60-80	Channery loam	GM, SC-SM, ML	A-2, A-4	0	12-25	67-86	66-86	50-74	35-52	18-31	3-7
	80-85	Channery sandy loam	SM	A-4, A-2	0	11-23	69-87	69-87	52-74	27-38	16-30	2-6
	85-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Maquinna--------	0-10	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-33	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	33-75	Gravelly silt loam	ML, SM	A-4, A-5	0	0	78-83	47-58	43-58	39-54	21-45	2-9
	75-107	Very gravelly silt loam	GC-GM, GM	A-7, A-2	0	0	61-62	34-44	31-44	27-40	21-45	6-11
	107-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Boussole--------	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-28	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	28-41	Silt loam	ML, OL	A-4, A-5	0	0	100	100	85-93	57-63	20-43	1-4
	41-51	Gravelly sandy loam	SM	A-4, A-2	0	0	86-96	58-76	41-59	28-41	18-40	1-4
	51-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20MTF:												
Wachusett-------	0-23	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	23-34	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	34-41	Silt loam	ML, OL	A-4, A-5	0	0	100	100	87-99	70-83	20-43	1-6
	41-60	Channery silt loam	MH, ML, GM	A-4, A-7	0	15-22	71-82	71-82	59-81	45-66	20-54	2-17
	60-80	Channery loam	SC-SM, ML, GM	A-4, A-2	0	12-25	67-86	66-86	50-74	35-52	18-31	3-7
	80-85	Channery sandy loam	SM	A-2, A-4	0	11-23	69-87	69-87	52-74	27-38	16-30	2-6
	85-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Maquinna--------	0-10	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-33	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	33-75	Gravelly silt loam	SM, ML	A-5, A-4	0	0	78-83	47-58	43-58	39-54	21-45	2-9
	75-107	Very gravelly silt loam	GC-GM, GM	A-2, A-7	0	0	61-62	34-44	31-44	27-40	21-45	6-11
	107-200	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20MTF:												
Enigma----------	0-10	Very cobbly sandy loam	GM, SM	A-2, A-1	0	8-58	42-73	40-72	29-56	14-29	20-41	2-5
	10-62	Extremely stony coarse sandy loam	GP-GM, GM	A-1	15-52	0-26	18-50	15-48	9-33	5-25	0-36	NP-4
	62-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20OC1:												
Scidmore--------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-9	Sandy loam	SM	A-2, A-5	0	0	92-100	84-100	59-74	28-39	0-43	NP-4
	9-31	Loamy sand	SM	A-2	0	0	93-100	85-100	65-85	15-24	0-22	NP-2
	31-50	Sand	SP-SM	A-3, A-2	0	0	89-96	77-92	58-76	6-12	0-22	NP-2
	50-150	Coarse sand	SP-SM, SW-SM	A-1	0	0	88-98	69-92	30-45	5-10	0-22	NP-2
Perouse, frequently ponded---------	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SP, SP-SM, SW-SM	A-1, A-3	0	0	85-97	85-97	45-56	4-10	0-14	NP
	40-60	Sand	SW-SM, SP, SP-SM	A-3, A-1	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP-SM, SP	A-3, A-1	0	0	86-97	85-97	45-56	3-6	0-14	NP
20OD1:												
Gustavus--------	0-12	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-33	Fine sandy loam	SM	A-4, A-2	0	0	100	100	82-88	34-38	0-22	NP-2
	33-68	Loamy sand	SM	A-2	0	0	85-100	84-100	55-68	13-20	0-22	NP-2
	68-140	Loamy sand	SM	A-2	0	0	85-100	84-100	52-64	13-19	0-22	NP-2
	140-150	Coarse sand	SW-SM, SP-SM	A-1	0	0	67-100	65-100	29-46	5-10	0-14	NP
Lamplugh--------	0-15	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	15-19	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	19-21	Sandy loam	SC-SM, SM	A-4, A-5	0	0	100	100	73-83	42-49	23-45	4-7
	21-35	Sandy loam	SC-SM, SM	A-4	0	0	100	100	70-81	39-49	20-39	4-9
	35-54	Silty clay loam	ML, MH, CL	A-7, A-6	0	0	100	100	90-97	82-91	39-55	19-21
	54-70	Very fine sandy loam	ML	A-4	0	0	100	100	92-100	53-63	17-40	2-7
	70-150	Silty clay loam	CL	A-7, A-6	0	0	100	100	89-97	81-89	38-44	19-21

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20ODF:												
Glacierbay------	0-8	Silt loam	OL, ML	A-4, A-5	0	0	100	100	94-100	87-100	21-49	2-9
	8-25	Silt loam	ML, CL	A-6, A-4	0	0	98-100	98-100	87-100	86-100	16-34	2-12
	25-58	Silt loam	CL	A-6	0	0	96-100	96-100	90-100	90-100	28-38	12-16
	58-100	Sand	SP-SM	A-3	0	0	97-100	97-100	56-63	6-10	0-14	NP
	100-130	Fine sand	SP-SM	A-2, A-3	0	0	97-100	97-100	88-95	9-12	0-14	NP
	130-150	Sand	SP, SP-SM	A-3, A-1	0	0	93-100	92-100	47-56	4-7	0-14	NP
Geikie----------	0-7	Loam	CL-ML	A-4	0	0	100	100	90-98	57-64	19-29	4-7
	7-32	Loam	CL-ML, CL	A-4	0	0	100	100	87-94	61-68	19-32	4-9
	32-48	Silt loam	CL-ML, CL, ML	A-7, A-4	0	0	100	100	93-100	82-92	23-47	7-13
	48-120	Sand	SP-SM	A-3	0	0	85-100	85-100	53-69	5-10	0-14	NP
	120-150	Gravelly sand	SP-SM, SP	A-1, A-3	0	0	56-79	54-78	33-52	2-6	0-14	NP
20OP1:												
Fossil----------	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-27	Medium gravelly coarse sand	SP, SP-SM	A-1	0	0-20	57-80	57-80	21-35	2-6	0-14	NP
	27-50	Very gravelly coarse sand	GP, GW, SP	A-1	0	7-22	29-60	29-60	11-26	1-4	0-14	NP
	50-95	Coarse sand	SP-SM, SP	A-1	0	0	82-92	82-92	30-40	3-6	0-14	NP
	95-150	Extremely gravelly coarse sand	GP	A-1	0	0-10	11-26	11-26	4-11	0-2	0-14	NP
Tyeen-----------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-12	Very gravelly sandy loam	SP-SM, SM	A-2, A-1	0-11	8-29	60-78	26-60	19-50	9-25	20-42	2-7
	12-50	Very gravelly coarse sandy loam	SM, SP-SM, SC-SM	A-1, A-2	0-11	7-23	62-80	28-61	17-39	9-23	17-31	2-7
	50-150	Very gravelly sandy loam	SM	A-1, A-2	0	7-24	68-79	35-60	26-52	13-27	17-43	2-10
Vivid-----------	0-8	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-28	Silt	ML	A-4	0	0	100	100	98-100	95-100	17-40	2-7
	28-150	Very cobbly sandy loam	SC-SM, GM, SM	A-2, A-1	0	28-65	56-83	55-82	39-67	16-32	17-41	2-8
20OP4:												
Kashoto---------	0-18	Peat	PT	A-8	0	0	---	---	---	---	---	---
	18-56	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	56-150	Muck	PT	A-8	0	0	---	---	---	---	---	---
Annoksek--------	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-12	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-30	Sandy loam	SM, SC-SM	A-2, A-4, A-5	0	0	90-93	79-91	61-79	35-47	22-43	6-9
	30-200	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20OP4:												
Bulky-----------	0-5	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	5-25	Sandy loam	SM	A-4	0	0	100	100	81-89	38-44	0-37	NP-4
	25-50	Silt loam	CL-ML, ML	A-7, A-4	0	0	100	100	80-95	66-81	17-45	2-11
	50-150	Sand	SP-SM	A-3	0	0	100	100	64-74	5-10	0-14	NP
20OP5:												
Fossil----------	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-27	Medium gravelly coarse sand	SP-SM, SP	A-1	0	0-20	57-80	57-80	21-35	2-6	0-14	NP
	27-50	Very gravelly coarse sand	GW, GP, SP	A-1	0	7-22	29-60	29-60	11-26	1-4	0-14	NP
	50-95	Coarse sand	SP-SM, SP	A-1	0	0	82-92	82-92	30-40	3-6	0-14	NP
	95-150	Extremely gravelly coarse sand	GP	A-1	0	0-10	11-26	11-26	4-11	0-2	0-14	NP
Tyeen-----------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-12	Very gravelly sandy loam	SP-SM, SM	A-1, A-2	0-11	8-29	60-78	26-60	19-50	9-25	20-42	2-7
	12-50	Very gravelly coarse sandy loam	SC-SM, SP-SM, SM	A-2, A-1	0-11	7-23	62-80	28-61	17-39	9-23	17-31	2-7
	50-150	Very gravelly sandy loam	SM	A-1, A-2	0	7-24	68-79	35-60	26-52	13-27	17-43	2-10
Vivid-----------	0-8	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-28	Silt	ML	A-4	0	0	100	100	98-100	95-100	17-40	2-7
	28-150	Very cobbly sandy loam	SC-SM, SM, GM	A-2, A-1	0	28-65	56-83	55-82	39-67	16-32	17-41	2-8
20OP6:												
Bulky-----------	0-5	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	5-25	Sandy loam	SM	A-4	0	0	100	100	81-89	38-44	0-37	NP-4
	25-50	Silt loam	CL-ML, ML	A-7, A-4	0	0	100	100	80-95	66-81	17-45	2-11
	50-150	Sand	SP-SM	A-3	0	0	100	100	64-74	5-10	0-14	NP
Bertha----------	0-3	Gravelly slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-13	Coarse sand	SP, SW-SM, SP-SM	A-1	0	0	86-97	85-97	33-42	4-8	0-14	NP
	13-22	Extremely gravelly coarse sand	GP, GW	A-1	0	0	10-32	7-30	3-15	0-3	0-14	NP
	22-150	Coarse sand	SP, SP-SM	A-1	0	0	82-93	81-92	32-40	3-8	0-14	NP

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >250 mm	Fragments: 75-250 mm	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	Cm				Pct	Pct					Pct	
20OP6:												
Icy	0-20	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	20-89	Silt loam	MH, CL	A-6, A-7	0	0	100	100	90-96	85-93	29-54	12-18
	89-119	Silt loam	CL, MH	A-6, A-7	0	0	100	100	91-99	86-93	29-54	12-18
	119-150	Loamy sand	SM	A-2	0	0	100	100	80-91	22-31	0-22	NP-2
20OPE:												
Tyeen	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-12	Very gravelly sandy loam	SP-SM, SM	A-1, A-2	0-11	8-29	60-78	26-60	19-50	9-25	20-42	2-7
	12-50	Very gravelly coarse sandy loam	SC-SM, SP-SM, SM	A-2, A-1	0-11	7-23	62-80	28-61	17-39	9-23	17-31	2-7
	50-150	Very gravelly sandy loam	SM	A-1, A-2	0	7-24	68-79	35-60	26-52	13-27	17-43	2-10
Shagcove	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-7	Cobbly fine sandy loam	SM	A-2, A-4	0	16-28	81-90	63-90	56-83	27-44	21-40	2-5
	7-49	Very cobbly loamy coarse sand	SM, SW-SM	A-1	0	19-24	60-75	44-67	24-40	9-19	0-24	NP-3
	49-60	Very cobbly loamy coarse sand	SM, SW-SM	A-1	0	19-24	60-75	44-67	24-40	9-19	0-24	NP-3
	60-150	Very gravelly loamy fine sand	SM, SP-SM	A-2, A-1	0	13-29	60-76	27-60	25-58	8-22	0-22	NP-2
Puffin	0-70	Extremely gravelly loamy coarse sand	SP, SP-SM	A-1	0-5	0-10	52-60	12-27	5-15	2-6	0-23	NP-3
	70-150	Extremely gravelly coarse sand	SP, SW	A-1	0-5	0-10	52-57	10-27	4-13	1-4	0-22	NP-2
20OV1:												
Perouse, frequently ponded	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SP-SM, SW-SM, SP	A-3, A-1	0	0	85-97	85-97	45-56	4-10	0-14	NP
	40-60	Sand	SP, SW-SM, SP-SM	A-1, A-3	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP, SP-SM	A-3, A-1	0	0	86-97	85-97	45-56	3-6	0-14	NP
Perouse	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SW-SM, SP-SM, SP	A-1, A-3	0	0	85-97	85-97	45-56	4-9	0-14	NP
	40-60	Sand	SW-SM, SP, SP-SM	A-1, A-3	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP-SM, SP	A-3, A-1	0	0	86-97	85-97	45-56	3-6	0-14	NP

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20OW1:												
Perouse---------	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SW-SM, SP, SP-SM	A-3, A-1	0	0	85-97	85-97	45-56	4-9	0-14	NP
	40-60	Sand	SP-SM, SW-SM, SP	A-1, A-3	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP, SP-SM	A-1, A-3	0	0	86-97	85-97	45-56	3-6	0-14	NP
Gustavus--------	0-12	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-33	Fine sandy loam	SM	A-2, A-4	0	0	100	100	82-88	34-38	0-22	NP-2
	33-68	Loamy sand	SM	A-2	0	0	85-100	84-100	55-68	13-20	0-22	NP-2
	68-140	Loamy sand	SM	A-2	0	0	85-100	84-100	52-64	13-19	0-22	NP-2
	140-150	Coarse sand	SP-SM, SW-SM	A-1	0	0	67-100	65-100	29-46	5-10	0-14	NP
Perouse, frequently ponded---------	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SW-SM, SP, SP-SM	A-3, A-1	0	0	85-97	85-97	45-56	4-10	0-14	NP
	40-60	Sand	SP-SM, SP, SW-SM	A-3, A-1	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP, SP-SM	A-1, A-3	0	0	86-97	85-97	45-56	3-6	0-14	NP
20OWF:												
Fairweather-----	0-2	Peat	PT	A-8	0	0	---	---	---	---	---	---
	2-5	Silt loam	OL, ML	A-5, A-4	0	0	100	100	92-100	81-91	21-49	3-9
	5-38	Silt loam	ML	A-4	0	0	100	100	93-100	86-95	18-38	3-9
	38-150	Sand	SP-SM	A-3	0	0	85-100	85-100	55-72	6-10	0-14	NP
Icy-------------	0-20	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	20-89	Silt loam	MH, CL	A-6, A-7	0	0	100	100	90-96	85-93	29-54	12-18
	89-119	Silt loam	CL, MH	A-6, A-7	0	0	100	100	91-99	86-93	29-54	12-18
	119-150	Loamy sand	SM	A-2	0	0	100	100	80-91	22-31	0-22	NP-2
20PL1:												
Tyeen-----------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-12	Very gravelly sandy loam	SP-SM, SM	A-1, A-2	0-11	8-29	60-78	26-60	19-50	9-25	20-42	2-7
	12-50	Very gravelly coarse sandy loam	SP-SM, SC-SM, SM	A-2, A-1	0-11	7-23	62-80	28-61	17-39	9-23	17-31	2-7
	50-150	Very gravelly sandy loam	SM	A-1, A-2	0	7-24	68-79	35-60	26-52	13-27	17-43	2-10

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20PL1:												
Cenotaph--------	0-17	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	17-25	Gravelly fine sandy loam	GC-GM, SM	A-2, A-1	0	0-14	55-78	53-77	46-71	21-32	25-42	6-7
	25-100	Gravelly fine sandy loam	SM, GC-GM, SC-SM	A-2, A-1	0	0-13	58-80	56-79	48-77	22-34	20-40	4-7
	100-150	Gravelly loamy fine sand	GM, SM	A-2, A-1	0	0	54-78	53-77	50-76	17-31	0-24	NP-3
Fossil----------	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-27	Medium gravelly coarse sand	SP, SP-SM	A-1	0	0-20	57-80	57-80	21-35	2-6	0-14	NP
	27-50	Very gravelly coarse sand	SP, GW, GP	A-1	0	7-22	29-60	29-60	11-26	1-4	0-14	NP
	50-95	Coarse sand	SP, SP-SM	A-1	0	0	82-92	82-92	30-40	3-6	0-14	NP
	95-150	Extremely gravelly coarse sand	GP	A-1	0	0-10	11-26	11-26	4-11	0-2	0-14	NP
20PL2:												
Tyeen-----------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-12	Very gravelly sandy loam	SM, SP-SM	A-1, A-2	0-11	8-29	60-78	26-60	19-50	9-25	20-42	2-7
	12-50	Very gravelly coarse sandy loam	SC-SM, SM, SP-SM	A-1, A-2	0-11	7-23	62-80	28-61	17-39	9-23	17-31	2-7
	50-150	Very gravelly sandy loam	SM	A-1, A-2	0	7-24	68-79	35-60	26-52	13-27	17-43	2-10
Fossil----------	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-27	Medium gravelly coarse sand	SP-SM, SP	A-1	0	0-20	57-80	57-80	21-35	2-6	0-14	NP
	27-50	Very gravelly coarse sand	GP, SP, GW	A-1	0	7-22	29-60	29-60	11-26	1-4	0-14	NP
	50-95	Coarse sand	SP-SM, SP	A-1	0	0	82-92	82-92	30-40	3-6	0-14	NP
	95-150	Extremely gravelly coarse sand	GP	A-1	0	0-10	11-26	11-26	4-11	0-2	0-14	NP
Fingers---------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-8	Very gravelly loamy coarse sand	SP-SM, SM, SW-SM	A-1	1-5	4-11	76-89	32-56	16-35	5-14	0-24	NP-3
	8-43	Extremely gravelly coarse sand	SW	A-1	1-4	8-13	61-67	21-34	8-16	2-4	0-22	NP-2
	43-150	Extremely gravelly coarse sand	GP	A-1	2-6	9-12	29-45	12-34	5-16	1-4	0-22	NP-2

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20PL3:												
Kashoto----------	0-18	Peat	PT	A-8	0	0	---	---	---	---	---	---
	18-56	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	56-150	Muck	PT	A-8	0	0	---	---	---	---	---	---
Annoksek---------	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-12	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-30	Sandy loam	SM, SC-SM	A-4, A-2, A-5	0	0	90-93	79-91	61-79	35-47	22-43	6-9
	30-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Ancon------------	0-8	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-21	Fine sandy loam	ML, SM, OL	A-5, A-4	0	0	100	100	83-89	47-56	21-45	2-5
	21-24	Fine sandy loam	OL, SM, ML	A-5, A-4	0	0	100	100	83-89	47-56	17-45	2-5
	24-53	Fine sandy loam	SM, ML	A-4	0	0	100	100	83-89	47-56	19-36	2-6
	53-103	Coarse sandy loam	SM, SC-SM	A-2, A-4	0	0	100	81-90	47-60	28-39	20-38	4-9
	103-200	Bedrock	---	---	---	---	---	---	---	---	---	---
20PL6:												
Tidalwave--------	0-4	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-16	Very fine sandy loam	OL, ML	A-4, A-5	0	0	100	100	98-100	61-63	0-41	NP-2
	16-24	Fine sandy loam	SM	A-4	0	0	100	100	87-90	46-50	0-30	NP-2
	24-49	Sandy loam	SM	A-4	0	0	100	100	75-83	42-46	0-25	NP-2
	49-150	Gravelly coarse sand	SP-SM, SW-SM	A-1	0	0-6	81-97	56-93	25-43	5-10	0-14	NP
Drybay-----------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-11	Silt loam	ML, OL	A-4, A-5	0	0	100	100	82-91	57-66	0-45	NP-5
	11-24	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	0-5	72-86	27-52	16-34	9-21	0-38	NP-5
	24-60	Extremely gravelly coarse sand	SW, SP	A-1	0	5-15	69-75	12-32	4-14	1-2	0-14	NP
	60-150	Extremely gravelly coarse sand	SW	A-1	0	11-15	69-77	12-34	4-15	1-3	0-14	NP
Puffin-----------	0-70	Extremely gravelly loamy coarse sand	SP, SP-SM	A-1	0-5	0-10	52-60	12-27	5-15	2-6	0-23	NP-3
	70-150	Extremely gravelly coarse sand	SP, SW	A-1	0-5	0-10	52-57	10-27	4-13	1-4	0-22	NP-2

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20PLD:												
Typic Cryaquents, sandy----------	0-7	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	7-15	Silt loam, fine sandy loam	SM, OH	A-2, A-5, A-4	0	0	82-100	81-100	56-100	27-76	0-52	NP-9
	15-32	Loamy fine sand, silt loam, sand	SP-SM, SP, SC	A-3, A-6, A-1	0	0	80-100	79-100	47-100	4-50	0-34	NP-13
	32-51	Fine sand, coarse sand, sand, loamy coarse sand	SP, SP-SM, SC-SM	A-2, A-3, A-1	0	0	80-100	79-100	47-100	4-30	0-25	NP-6
	51-72	Fine sand, loamy coarse sand, sand, coarse sand	SC-SM, SP, SP-SM	A-3, A-2, A-1	0	0	80-100	79-100	47-100	4-30	0-25	NP-6
	72-152	Fine sand, sand, coarse sand, loamy coarse sand	SP, SP-SM, SC-SM	A-2, A-3, A-1	0	0	80-100	79-100	47-100	4-30	0-25	NP-6
Typic Cryorthents, sandy, rarely flooded--------	0-8	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-20	Loamy sand, sand, sandy loam	SM, SP-SM	A-1, A-2	0	0	78-100	77-100	47-94	5-33	0-38	NP-5
	20-46	Loamy sand, sand	SM, SP-SM	A-1, A-2	0	0	80-100	79-100	50-90	5-27	0-21	NP-2
	46-49	Very fine sandy loam, loamy sand	SM, ML, CL-ML	A-4, A-2	0	0	79-100	78-100	65-100	34-75	0-25	NP-6
	49-152	Gravelly coarse sand, gravelly loamy sand	SP-SM, SP, SM	A-2, A-1	0	0	60-100	58-100	21-64	4-27	0-21	NP-2

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20RW2: Riverwash.												
Oxyaquic Cryorthents, sandy or gravelly-------	0-8	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	8-15	Gravelly loamy sand, very gravelly sand, gravelly sand, very gravelly loamy sand, gravelly sandy loam	GP, GM, SP-SM	A-1, A-2	0	0-18	40-63	38-62	24-59	2-19	0-43	NP-5
	15-38	Extremely gravelly coarse sand, gravelly coarse sand, extremely gravelly sand, very gravelly coarse sand, gravelly loamy sand	GM, GP, SP-SM	A-1	0	0	20-60	17-58	6-40	1-16	0-21	NP-2
	38-152	Very gravelly sand, extremely gravelly coarse sand, extremely gravelly sand, gravelly loamy sand, very gravelly coarse sand	GP, GM, GP-GM	A-1	0	0-53	14-60	11-58	4-40	1-16	0-21	NP-2
20SC: Beaches.												
Typic Cryopsamments, rarely flooded-	0-5	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	5-23	Sand	SP-SM, SM	A-2, A-3	0	0	95-100	82-100	57-88	5-18	0-27	NP-2
	23-152	Sand, loamy sand	SP-SM, SM	A-2, A-3	0	0	95-100	82-100	57-90	5-22	0-18	NP-2
20TE2: Tidalwave-------	0-4	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-16	Very fine sandy loam	OL, ML	A-4, A-5	0	0	100	100	98-100	61-63	0-41	NP-2
	16-24	Fine sandy loam	SM	A-4	0	0	100	100	87-90	46-50	0-30	NP-2
	24-49	Sandy loam	SM	A-4	0	0	100	100	75-83	42-46	0-25	NP-2
	49-150	Gravelly coarse sand	SP-SM, SW-SM	A-1	0	0-6	81-97	56-93	25-43	5-10	0-14	NP

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20TE2:												
Drybay----------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-11	Silt loam	ML, OL	A-5, A-4	0	0	100	100	82-91	57-66	0-45	NP-5
	11-24	Very gravelly coarse sandy loam	SP-SM, SM	A-1	0	0-5	72-86	27-52	16-34	9-21	0-38	NP-5
	24-60	Extremely gravelly coarse sand	SW, SP	A-1	0	5-15	69-75	12-32	4-14	1-2	0-14	NP
	60-150	Extremely gravelly coarse sand	SW	A-1	0	11-15	69-77	12-34	4-15	1-3	0-14	NP
20TF1:												
Water, saline.												
Astrolable------	0-25	Sandy clay loam	SC	A-2, A-7	0	0	82-93	81-92	59-80	24-37	33-44	16-21
	25-150	Extremely gravelly coarse sand	GP-GM, GP	A-1	0	0	32-55	29-54	12-26	3-8	0-22	NP-2
Murkbay---------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Loamy sand	SM	A-2	0	0	100	100	66-79	25-35	0-14	NP
	3-25	Sand	SM, SP-SM	A-2, A-3	0	0	100	100	66-75	9-15	0-14	NP
	25-80	Sand	SP-SM, SM	A-2, A-3	0	0	100	100	66-75	9-15	0-14	NP
	80-125	Fine sand	SM	A-2	0	0	100	100	93-96	13-17	0-14	NP
	125-150	Sand	SM, SP-SM	A-2, A-3	0	0	100	100	66-75	9-15	0-14	NP
20TF3:												
Water, saline.												
Astrolable------	0-25	Sandy clay loam	SC	A-7, A-2	0	0	82-93	81-92	59-80	24-37	33-44	16-21
	25-150	Extremely gravelly coarse sand	GP-GM, GP	A-1	0	0	32-55	29-54	12-26	3-8	0-22	NP-2
Beartrack-------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-21	Silt loam	ML, CL-ML	A-4	0	0	100	100	97-100	88-93	20-39	4-6
	21-40	Silt loam	ML	A-4	0	0	100	100	97-100	83-87	19-40	3-7
	40-150	Silt loam	ML	A-4	0	0	100	100	97-100	83-87	19-40	3-7

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20TH1:												
Ibach-----------	0-9	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	9-27	Bouldery silt loam	ML, GM	A-4	9-53	0-26	65-93	64-93	56-90	46-77	0-39	NP-4
	27-56	Extremely bouldery sandy loam	GP-GM, SM	A-2, A-1	52-89	0-15	32-87	29-86	19-62	10-33	0-37	NP-4
	56-73	Extremely gravelly sandy loam	GP, GP-GM	A-1	0-5	6-16	15-28	11-25	7-19	4-11	0-32	NP-4
	73-150	Extremely gravelly sandy loam	GP-GC, GP-GM	A-1, A-2	0-5	6-22	22-30	18-27	12-21	6-12	0-34	NP-9
Lamplugh--------	0-15	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	15-19	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	19-21	Sandy loam	SC-SM, SM	A-4, A-5	0	0	100	100	73-83	42-49	23-45	4-7
	21-35	Sandy loam	SC-SM, SM	A-4	0	0	100	100	70-81	39-49	20-39	4-9
	35-54	Silty clay loam	CL, ML, MH	A-6, A-7	0	0	100	100	90-97	82-91	39-55	19-21
	54-70	Very fine sandy loam	ML	A-4	0	0	100	100	92-100	53-63	17-40	2-7
	70-150	Silty clay loam	CL	A-6, A-7	0	0	100	100	89-97	81-89	38-44	19-21
Bartlettcove----	0-12	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	12-14	Loamy fine sand	SM	A-2	0	0	95-100	95-100	87-97	28-34	0-14	NP
	14-30	Loamy fine sand	SM	A-2	0	0	95-100	95-100	87-97	28-34	0-14	NP
	30-45	Loamy fine sand	SM	A-2	0	0	95-100	95-100	87-97	28-34	0-14	NP
	45-150	Fine sand	SP-SM, SM	A-2	0	0	95-100	95-100	89-95	11-14	0-14	NP
20UL1. Urban land												
20UM1: Rock outcrop.												
Bearisland------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-24	Very gravelly loamy coarse sand	SC-SM, SW-SC, SP-SM	A-1	0	4-11	64-76	31-56	15-36	5-15	16-26	2-6
	24-150	Very gravelly loamy coarse sand	SC-SM, SP, SP-SC	A-1, A-2	0	0-11	62-72	28-56	13-34	4-14	19-28	4-7

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20UM2:												
Rock outcrop.												
Bearisland------	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-24	Very gravelly loamy coarse sand	SC-SM, SP-SM, SW-SC	A-1	0	4-11	64-76	31-56	15-36	5-15	16-26	2-6
	24-150	Very gravelly loamy coarse sand	SP, SC-SM, SP-SC	A-1, A-2	0	0-11	62-72	28-56	13-34	4-14	19-28	4-7
20VBA:												
Typic Cryofluvents---	0-10	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	10-13	Extremely gravelly sand, gravelly loamy sand, sand, silt loam, sandy loam	SC, ML, GP-GM	A-4, A-7, A-1	0-11	0-79	30-100	28-100	17-100	8-79	0-43	NP-13
	13-18	Loamy sand, extremely gravelly sand, very gravelly sand, sand, gravelly loamy sand	SM, GP	A-1, A-2, A-4	0-10	0-42	13-100	10-100	6-94	1-36	0-21	NP-2
	18-23	Gravelly loamy sand, sandy loam, silt loam, sand, extremely gravelly sand	SC, GP-GM, ML	A-4, A-1, A-7	0-10	0-75	22-100	19-100	12-100	5-79	0-43	NP-13
	23-31	Silt loam, gravelly loamy sand, loamy sand, sand, extremely gravelly sand	ML, SM, GP	A-2, A-1, A-6	0-10	0-74	23-100	20-100	12-100	3-59	0-39	NP-13
	31-36	Loamy sand, extremely gravelly sand, very gravelly sand, gravelly loamy sand, sand	SP-SM, SM, GP	A-1, A-2, A-3	0-10	0-42	13-100	10-100	6-91	0-25	0-21	NP-2
	36-49	Extremely gravelly sand, loamy sand, silt loam, sand, gravelly loamy sand	ML, SM, GP	A-1, A-7, A-2	0-10	0-75	22-100	19-100	11-100	3-59	0-43	NP-13
	49-152	Loamy sand, gravelly loamy sand, very gravelly sand, sand, extremely gravelly sand	SP-SM, SM, GP	A-2, A-3, A-1	0-10	0-42	13-100	10-100	6-91	0-25	0-21	NP-2

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
20VBA:												
Aquic Dystrocryepts, silty	0-2	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-3	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-18	Sandy loam, silt loam, fine sandy loam, fine sand	SM, OH	A-7, A-2, A-4	0	0	100	100	67-100	30-79	0-52	NP-13
	18-34	Very fine sandy loam, fine sandy loam, silt loam	ML, SM	A-2, A-7, A-4	0	0	100	100	68-100	32-83	0-43	NP-13
	34-50	Very fine sandy loam, fine sandy loam, silt loam	CL, SM	A-6, A-2, A-4	0	0	100	100	68-100	32-83	0-34	NP-13
	50-67	Very fine sandy loam, silt loam	ML, CL-ML, CL	A-6, A-4	0	0	100	100	85-100	62-100	0-34	NP-13
	67-152	Silt loam, very fine sandy loam	ML, CL, CL-ML	A-6, A-4	0	0	100	100	85-100	62-100	0-34	NP-13
20WD1:												
Perouse	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SW-SM, SP-SM, SP	A-3, A-1	0	0	85-97	85-97	45-56	4-9	0-14	NP
	40-60	Sand	SW-SM, SP, SP-SM	A-3, A-1	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP, SP-SM	A-1, A-3	0	0	86-97	85-97	45-56	3-6	0-14	NP
Scidmore	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-9	Sandy loam	SM	A-2, A-5	0	0	92-100	84-100	59-74	28-39	0-43	NP-4
	9-31	Loamy sand	SM	A-2	0	0	93-100	85-100	65-85	15-24	0-22	NP-2
	31-50	Sand	SP-SM	A-3, A-2	0	0	89-96	77-92	58-76	6-12	0-22	NP-2
	50-150	Coarse sand	SW-SM, SP-SM	A-1	0	0	88-98	69-92	30-45	5-10	0-22	NP-2
Perouse, frequently ponded	0-4	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	4-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
	9-40	Sand	SP-SM, SP, SW-SM	A-1, A-3	0	0	85-97	85-97	45-56	4-10	0-14	NP
	40-60	Sand	SP, SP-SM, SW-SM	A-1, A-3	0	0	93-100	92-100	49-58	4-9	0-14	NP
	60-150	Sand	SP-SM, SP	A-1, A-3	0	0	86-97	85-97	45-56	3-6	0-14	NP

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
22HIA:												
Rock outcrop, rugged summit.												
Lithic Cryorthents, rugged summit--	0-3	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-6	Loam, gravelly loam, very gravelly loam	OH, SM	A-1, A-7, A-5	0	0-8	78-100	34-100	27-92	18-70	29-52	3-13
	6-36	Gravelly loam, gravelly sandy loam, very cobbly sandy loam	SM, CL	A-6, A-1, A-2	0	22-30	75-90	41-90	27-78	14-53	0-36	NP-13
	36-200	Bedrock	---	---	---	---	---	---	---	---	---	---
22SM1:												
Woodlake--------	0-9	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	9-37	Extremely stony sandy loam	SM, GM	A-4, A-1, A-2	46-68	10-26	38-85	36-85	26-67	13-38	0-40	NP-3
	37-70	Extremely stony sandy loam	GC-GM, GM, GP-GM	A-1	19-41	19-46	26-63	23-62	16-47	8-25	18-38	3-5
	70-200	Bedrock	---	---	---	---	---	---	---	---	---	---
Flapjack--------	0-4	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	4-20	Extremely cobbly sandy loam	GP-GM, GM, GW-GM	A-1	0	44-65	32-54	29-52	19-44	8-21	0-41	NP-6
	20-64	Extremely gravelly sandy loam	GM, GW-GM, GP-GM	A-1	0	13-29	32-46	29-44	20-35	7-15	0-41	NP-5
	64-200	Bedrock	---	---	---	---	---	---	---	---	---	---
BR. Rock outcrop												
GL2. Glaciers												
P. Pits												
RW. Riverwash												

Table 14.—Engineering Properties—Continued

Map unit symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>250 mm	75-250 mm	4	10	40	200		
	Cm				Pct	Pct					Pct	
SW. Water, saline												
W. Water												

Table 15.—Physical Soil Properties

(Sand, silt, and clay values are shown either as a range or a representative value (rv). Absence of an entry indicates that data were not estimated. Soil properties are measured or inferred from direct observations in the field or laboratory)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20AF1:									
Muirpoint-------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-11	65-70	20-27	5-10	1.47-1.61	10.0-100.0	0.06-0.11	0.2-0.7	0.9-1.3
	11-30	80-85	6-16	4-10	1.59-1.61	100.0-200.0	0.01-0.04	0.0-0.9	1.6-2.0
	30-150	90-98	0-9	1-5	1.55-1.64	500.0-600.0	0.00-0.02	0.0-0.0	1.6-2.0
Puffin----------	0-70	80-85	8-18	0-7	1.59-1.68	100.0-200.0	0.00-0.02	0.0-0.2	0.1-2.5
	70-150	90-97	0-10	0-5	1.63-1.67	500.0-600.0	0.00-0.02	0.0-0.2	0.1-2.5
20AF2:									
Entisols, alluvial fans, occasionally flooded--------	0-3	---	---	---	0.22-0.29	100.0-700.0	0.10-0.30	---	60-95
	3-6	70-90	5-30	0-5	1.43-1.49	42.0-141.0	0.07-0.10	0.0-0.4	0.0-5.0
	6-26	50-100	0-45	0-5	1.47-1.60	14.0-141.0	0.04-0.10	0.0-0.4	0.5-2.0
	26-152	85-100	0-10	0-5	1.63-1.70	42.0-705.0	0.00-0.02	0.0-0.3	0.3-1.0
20CL1:									
Strawberry------	0-3	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	65-100
	3-49	55-76	20-40	2-7	1.51-1.56	2.5-14.0	0.08-0.14	0.0-0.6	0.3-4.0
	49-150	55-76	19-40	2-7	1.50-1.61	2.5-14.0	0.00-0.13	0.0-0.7	0.4-8.0
Fingerock-------	0-18	87-95	3-12	1-3	1.52-1.62	300.0-400.0	0.04-0.05	0.0-0.1	0.1-2.5
	18-22	87-95	3-12	1-3	1.56-1.60	300.0-400.0	0.03-0.04	0.0-0.1	0.1-2.5
	22-130	87-95	3-12	1-3	1.56-1.60	300.0-400.0	0.02-0.03	0.0-0.1	0.1-2.5
	130-150	87-95	3-12	1-3	1.52-1.62	300.0-400.0	0.02-0.04	0.0-0.1	0.1-2.5
20CP1:									
Oberlin---------	0-3	55-73	18-41	3-9	1.30-1.61	2.5-14.0	0.11-0.15	0.1-0.8	2.0-11
	3-18	58-75	16-38	3-9	1.55-1.64	75.0-115.0	0.08-0.15	0.1-0.9	0.5-6.0
	18-35	64-78	12-28	8-11	1.46-1.58	5.0-28.0	0.06-0.14	0.5-1.0	0.1-2.5
	35-58	79-88	7-18	2-5	1.50-1.57	425.0-705.0	0.02-0.05	0.0-0.4	0.1-2.5
	58-150	92-97	0-6	2-4	1.61-1.71	425.0-705.0	0.01-0.03	0.0-0.3	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20CP1:									
Perouse, frequently ponded	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-97	0-8	1-3	1.59-1.67	300.0-400.0	0.03-0.05	0.0-0.2	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-100	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
Perouse	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-98	0-7	1-3	1.58-1.67	300.0-400.0	0.03-0.05	0.0-0.2	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-99	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
20CP2:									
Monashka	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-8	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	8-19	95-100	0-5	0-2	1.61-1.71	300.0-400.0	0.03-0.05	0.0-0.0	0.1-2.5
	19-150	95-100	0-5	0-2	1.61-1.71	300.0-400.0	0.03-0.05	0.0-0.0	0.1-2.5
Murkbay	0-1	---	---	---	0.20-0.26	100.0-700.0	0.10-0.30	---	60-95
	1-3	70-90	7-29	1-3	1.60-1.62	100.0-200.0	0.04-0.07	0.0-0.1	0.1-2.5
	3-25	90-100	0-10	0-3	1.56-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	25-80	90-100	0-10	0-3	1.56-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	80-125	90-98	2-10	0-3	1.50-1.69	300.0-400.0	0.04-0.07	0.0-0.1	0.1-2.5
	125-150	90-100	0-10	0-3	1.56-1.69	300.0-400.0	0.02-0.04	0.0-0.1	0.1-2.5
20CPF:									
Icy	0-20	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	20-89	10-14	60-70	18-27	1.34-1.43	5.0-10.0	0.17-0.20	1.9-4.1	0.4-8.0
	89-119	10-14	60-71	18-27	1.35-1.48	10.0-50.0	0.17-0.20	1.9-4.1	0.4-8.0
	119-150	70-85	10-30	0-5	1.50-1.62	100.0-200.0	0.04-0.05	0.0-0.4	0.1-2.5
Excursion	0-14	---	---	---	0.14-0.27	100.0-700.0	0.30-0.58	---	50-100
	14-26	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	26-70	50-52	33-36	12-15	1.50-1.57	5.0-25.0	0.14-0.17	1.2-1.6	0.4-8.0
	70-150	50-60	31-41	6-9	1.44-1.50	5.0-25.0	0.11-0.14	0.5-0.9	0.4-8.0
20ED1:									
Gustavus	0-12	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	12-33	55-75	20-40	2-5	1.52-1.74	10.0-50.0	0.09-0.11	0.0-0.4	0.1-2.5
	33-68	82-90	8-16	2-5	1.53-1.56	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	68-140	82-90	8-16	2-5	1.55-1.61	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	140-150	92-97	2-6	1-3	1.58-1.69	500.0-600.0	0.02-0.03	0.0-0.3	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20ED1:									
Bartlettcove----	0-12	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	12-14	84-86	11-14	1-3	1.50-1.63	100.0-200.0	0.06-0.13	0.0-0.4	0.1-2.5
	14-30	84-86	11-14	1-3	1.32-1.50	100.0-200.0	0.06-0.13	0.0-0.1	0.1-2.5
	30-45	84-86	11-15	1-3	1.51-1.56	100.0-200.0	0.06-0.13	0.0-0.1	0.1-2.5
	45-150	92-98	0-7	1-3	1.53-1.61	300.0-400.0	0.04-0.05	0.0-0.1	0.1-2.5
20ED2:									
Beardslee-------	0-13	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	13-21	65-70	20-30	1-10	1.38-1.59	10.0-100.0	0.12-0.15	0.0-0.9	2.0-11
	21-48	75-85	10-22	1-5	1.50-1.59	100.0-200.0	0.04-0.05	0.0-0.4	0.1-2.5
	48-150	90-98	0-10	0-5	1.58-1.70	300.0-400.0	0.03-0.04	0.0-0.4	0.1-2.5
Monashka--------	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-8	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	8-19	95-100	0-5	0-2	1.61-1.71	300.0-400.0	0.03-0.05	0.0-0.0	0.1-2.5
	19-150	95-100	0-5	0-2	1.61-1.71	300.0-400.0	0.03-0.05	0.0-0.0	0.1-2.5
20FP1:									
Drybay----------	0-2	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	2-11	40-45	50-57	3-10	1.10-1.45	5.0-10.0	0.20-0.24	0.1-0.9	2.0-11
	11-24	65-70	22-32	3-10	1.45-1.59	10.0-100.0	0.02-0.06	0.0-0.6	0.4-8.0
	24-60	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
	60-150	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
Tidalwave-------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	4-16	55-58	38-42	3-5	1.30-1.51	10.0-50.0	0.14-0.17	0.1-0.3	2.0-11
	16-24	58-63	32-38	3-5	1.55-1.57	10.0-50.0	0.10-0.15	0.0-0.3	0.5-6.0
	24-49	58-65	30-38	3-5	1.45-1.60	10.0-50.0	0.09-0.14	0.0-0.3	0.3-4.0
	49-150	90-95	4-9	0-1	1.67-1.68	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
20FP2:									
Bertha----------	0-3	---	---	---	0.18-0.27	100.0-700.0	0.00-0.00	---	40-100
	3-13	90-100	0-9	0-1	1.58-1.71	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
	13-22	90-100	0-9	0-1	1.58-1.71	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
	22-150	90-100	0-9	0-1	1.58-1.71	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
Puffin----------	0-70	80-85	8-18	0-7	1.59-1.68	100.0-200.0	0.00-0.02	0.0-0.2	0.1-2.5
	70-150	90-97	0-10	0-5	1.63-1.67	500.0-600.0	0.00-0.02	0.0-0.2	0.1-2.5
20FP3:									
Tidalwave-------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	4-16	55-58	38-42	3-5	1.30-1.51	10.0-50.0	0.14-0.17	0.1-0.3	2.0-11
	16-24	58-63	32-38	3-5	1.55-1.57	10.0-50.0	0.10-0.15	0.0-0.3	0.5-6.0
	24-49	58-65	30-38	3-5	1.45-1.60	10.0-50.0	0.09-0.14	0.0-0.3	0.3-4.0
	49-150	90-95	4-9	0-1	1.67-1.68	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20FP3:									
Ashmun, frequently ponded----------	0-1	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	1-15	95-100	0-5	0-0	1.63-1.69	500.0-600.0	0.02-0.03	0.0-0.0	0.1-2.5
	15-150	95-100	0-5	0-0	1.63-1.69	500.0-600.0	0.02-0.03	0.0-0.0	0.1-2.5
Drybay----------	0-2	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	2-11	40-45	50-57	3-10	1.10-1.45	5.0-10.0	0.20-0.24	0.1-0.9	2.0-11
	11-24	65-70	22-32	3-10	1.45-1.59	10.0-100.0	0.02-0.06	0.0-0.6	0.4-8.0
	24-60	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
	60-150	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
20FPL:									
Cryaquepts------	0-10	---	---	---	0.22-0.29	100.0-700.0	0.20-0.40	---	60-95
	10-15	40-50	36-50	7-20	1.18-1.30	4.0-14.0	0.11-0.18	0.3-2.0	8.0-10
	15-28	40-90	10-50	0-20	1.31-1.48	4.0-141.0	0.02-0.16	0.0-1.9	2.0-6.0
	28-152	65-90	5-30	0-5	1.51-1.65	14.0-141.0	0.00-0.00	0.0-0.2	1.0-3.0
Typic Cryaquents, gravelly, very poorly drained-	0-4	---	---	---	0.22-0.29	5.0-25.0	0.30-0.50	---	60-95
	4-8	---	---	---	0.22-0.29	5.0-25.0	0.30-0.52	---	60-95
	8-16	55-75	15-44	0-10	1.52-1.60	14.0-42.0	0.04-0.07	0.0-0.9	0.5-2.0
	16-38	85-100	0-15	0-5	1.58-1.72	141.0-705.0	0.00-0.02	0.0-0.2	0.0-2.0
	38-152	85-100	0-15	0-5	1.58-1.72	141.0-705.0	0.00-0.02	0.0-0.2	0.0-2.0
20FPM:									
Typic Cryaquents, silty----------	0-3	---	---	---	0.22-0.29	5.0-25.0	0.30-0.50	---	60-95
	3-7	---	---	---	0.22-0.29	5.0-25.0	0.30-0.52	---	60-95
	7-9	10-75	25-88	0-20	1.19-1.49	4.0-14.0	0.12-0.20	0.0-2.3	6.0-10
	9-19	10-100	0-88	0-20	1.40-1.60	4.0-141.0	0.00-0.19	0.0-2.3	0.5-2.0
	19-29	10-100	0-88	0-20	1.40-1.61	4.0-141.0	0.00-0.19	0.0-2.3	0.0-2.0
	29-152	10-100	0-88	0-20	1.40-1.61	4.0-141.0	0.00-0.19	0.0-2.3	0.0-2.0
20FPY:									
Oxyaquic Cryorthents, sandy or gravelly-------	0-8	---	---	---	0.22-0.29	100.0-700.0	0.20-0.40	---	60-95
	8-15	50-100	0-40	0-10	1.33-1.51	14.0-141.0	0.02-0.08	0.0-0.6	6.0-10
	15-38	70-100	0-26	0-5	1.52-1.62	42.0-705.0	0.00-0.04	0.0-0.2	0.5-2.0
	38-152	70-100	0-26	0-5	1.52-1.62	42.0-705.0	0.00-0.04	0.0-0.2	0.5-2.0

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20FPY: Typic Cryaquents, sandy or gravelly-------	0-5	---	---	---	0.22-0.29	5.0-25.0	0.30-0.50	---	60-95
	5-13	10-100	0-88	0-20	1.34-1.49	4.0-141.0	0.05-0.19	0.0-2.3	4.0-8.0
	13-43	10-100	0-79	0-40	1.47-1.70	1.4-141.0	0.00-0.18	0.0-0.0	0.5-2.0
	43-75	10-100	0-73	0-40	1.43-1.69	1.4-141.0	0.00-0.18	0.0-6.4	0.0-2.0
	75-152	10-100	0-73	0-40	1.43-1.67	1.4-141.0	0.01-0.18	0.0-6.4	0.0-2.0
20FPZ: Typic Cryorthents, gravelly-------	0-3	---	---	---	0.22-0.29	100.0-700.0	0.20-0.40	---	60-95
	3-8	50-100	0-50	0-10	1.32-1.56	14.0-141.0	0.02-0.11	0.0-0.7	4.0-8.0
	8-20	70-100	0-30	0-10	1.50-1.64	42.0-141.0	0.01-0.04	0.0-0.6	0.5-2.0
	20-30	85-100	0-15	0-5	1.55-1.72	42.0-705.0	0.01-0.03	0.0-0.2	0.0-2.0
	30-152	85-100	0-15	0-5	1.55-1.72	42.0-705.0	0.01-0.03	0.0-0.2	0.0-2.0
Typic Cryofluvents---	0-10	---	---	---	0.22-0.29	100.0-700.0	0.20-0.40	---	60-95
	10-13	10-100	0-87	0-20	1.32-1.50	4.0-141.0	0.02-0.19	0.0-2.3	4.0-8.0
	13-18	70-100	0-30	0-5	1.53-1.60	42.0-141.0	0.01-0.06	0.0-0.4	0.5-2.0
	18-23	10-100	0-87	0-20	1.32-1.50	4.0-141.0	0.02-0.19	0.0-2.3	4.0-8.0
	23-31	10-100	0-70	0-20	1.50-1.53	4.0-141.0	0.02-0.18	0.0-2.2	2.0-4.0
	31-36	70-100	0-25	0-5	1.53-1.66	42.0-141.0	0.01-0.06	0.0-0.4	0.5-2.0
	36-49	10-100	0-70	0-20	1.25-1.56	4.0-141.0	0.02-0.18	0.0-2.3	2.0-6.0
	49-152	70-100	0-25	0-5	1.53-1.66	42.0-141.0	0.01-0.06	0.0-0.4	0.5-2.0
20GP1: Gustavus--------	0-12	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	12-33	55-75	20-40	2-5	1.52-1.74	10.0-50.0	0.09-0.11	0.0-0.4	0.1-2.5
	33-68	82-90	8-16	2-5	1.53-1.56	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	68-140	82-90	8-16	2-5	1.55-1.61	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	140-150	92-97	2-6	1-3	1.58-1.69	500.0-600.0	0.02-0.03	0.0-0.3	0.1-2.5
Ibach-----------	0-9	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	65-100
	9-27	20-38	55-75	3-8	1.16-1.59	1.0-7.5	0.04-0.18	0.0-0.2	2.0-9.0
	27-56	53-75	18-42	3-8	1.48-1.62	2.5-14.0	0.01-0.04	0.0-0.3	0.4-8.0
	56-73	53-75	18-42	3-8	1.49-1.64	2.5-14.0	0.01-0.04	0.0-0.4	0.4-6.0
	73-150	55-75	18-38	3-15	1.51-1.61	2.5-14.0	0.02-0.04	0.0-0.4	0.4-4.0
Scidmore--------	0-3	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	3-9	68-70	22-28	3-8	1.39-1.62	10.0-50.0	0.11-0.15	0.0-0.4	2.0-11
	9-31	82-85	10-15	3-5	1.53-1.70	100.0-200.0	0.04-0.07	0.0-0.3	0.1-2.5
	31-50	91-98	0-8	1-5	1.56-1.71	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	50-150	93-98	0-6	1-5	1.60-1.70	500.0-600.0	0.02-0.05	0.0-0.1	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20HI1:									
Foad	0-5	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	5-10	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	10-15	27-35	56-63	5-10	1.21-1.33	5.0-10.0	0.07-0.14	0.1-0.5	6.0-10
	15-84	27-35	55-65	5-10	0.97-1.03	5.0-10.0	0.08-0.14	0.1-0.5	6.0-10
	84-200	---	---	---	---	0.0-0.0	---	---	---
Boussole	0-10	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	10-28	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	28-41	40-46	50-54	4-8	1.08-1.46	5.0-10.0	0.20-0.23	0.2-0.7	2.0-11
	41-51	50-60	36-42	4-8	1.31-1.52	10.0-50.0	0.08-0.12	0.1-1.4	1.2-9.5
	51-200	---	---	---	---	0.0-0.1	---	---	---
20HI2:									
Kashoto	0-18	---	---	---	0.14-0.27	100.0-700.0	0.30-0.58	---	50-100
	18-56	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	56-150	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
Foad	0-5	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	5-10	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	10-15	27-35	56-63	5-10	1.21-1.33	5.0-10.0	0.07-0.14	0.0-0.4	6.0-10
	15-84	27-35	55-65	5-10	0.97-1.03	5.0-10.0	0.08-0.14	0.0-0.3	6.0-10
	84-200	---	---	---	---	0.0-0.0	---	---	---
Kutskloh	0-9	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	9-21	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	21-30	23-35	58-74	3-15	1.08-1.16	5.0-10.0	0.19-0.22	0.0-1.2	8.0-10
	30-150	23-35	58-74	3-15	1.08-1.16	5.0-10.0	0.03-0.10	0.0-0.5	8.0-10
20HI3:									
Polkapenn	0-10	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	10-22	70-78	16-25	4-6	1.60-1.61	100.0-200.0	0.03-0.08	0.0-0.2	2.0-9.0
	22-42	70-78	16-25	4-6	1.48-1.56	100.0-200.0	0.03-0.08	0.0-0.3	2.0-9.0
	42-200	---	---	---	---	0.0-0.1	---	---	---
Dagelet	0-3	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	3-8	60-68	26-37	3-8	1.32-1.44	100.0-200.0	0.09-0.13	0.1-0.6	2.0-9.0
	8-37	60-70	22-32	3-8	1.34-1.62	10.0-100.0	0.03-0.08	0.1-0.7	0.4-8.0
	37-60	0-74	18-26	3-8	1.48-1.59	10.0-100.0	0.02-0.06	0.0-1.0	0.4-8.0
	60-200	---	---	---	---	0.0-0.1	---	---	---
Nunatak	0-3	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	3-10	55-68	22-35	6-10	1.24-1.43	10.0-50.0	0.08-0.13	0.2-0.9	2.0-9.0
	10-36	55-70	20-35	5-10	1.50-1.56	10.0-100.0	0.02-0.07	0.0-0.5	0.5-6.0
	36-113	55-72	18-35	5-10	1.47-1.58	10.0-100.0	0.02-0.05	0.0-0.5	0.4-8.0
	113-200	---	---	---	---	0.0-0.1	---	---	---

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20HI5:									
Kaknau	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-12	60-68	27-38	1-5	1.35-1.47	10.0-50.0	0.14-0.17	0.0-0.5	2.0-11
	12-40	60-68	27-38	1-5	1.55-1.57	10.0-50.0	0.07-0.14	0.0-0.4	0.5-6.0
	40-87	38-45	50-58	4-7	1.36-1.57	5.0-10.0	0.17-0.22	0.0-0.6	0.3-4.0
	87-200	---	---	---	---	0.1-1.0	---	---	---
Tricklake	0-4	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	4-22	24-40	52-68	1-8	0.99-1.48	5.0-10.0	0.20-0.23	0.0-0.7	2.0-11
	22-56	50-65	32-49	1-5	1.43-1.57	10.0-50.0	0.10-0.15	0.0-0.4	0.5-6.0
	56-150	50-65	33-49	1-3	1.43-1.58	10.0-50.0	0.10-0.15	0.0-0.1	0.5-6.0
20HIB:									
Drybay	0-2	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	2-11	40-45	50-57	3-10	1.10-1.45	5.0-10.0	0.20-0.24	0.1-0.9	2.0-11
	11-24	65-70	22-32	3-10	1.45-1.59	10.0-100.0	0.02-0.06	0.0-0.6	0.4-8.0
	24-60	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
	60-150	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
Kaknau	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-12	60-68	27-38	1-5	1.35-1.47	10.0-50.0	0.14-0.17	0.0-0.5	2.0-11
	12-40	60-68	27-38	1-5	1.55-1.57	10.0-50.0	0.07-0.14	0.0-0.4	0.5-6.0
	40-87	38-45	50-58	4-7	1.36-1.57	5.0-10.0	0.17-0.22	0.0-0.6	0.3-4.0
	87-200	---	---	---	---	0.1-1.0	---	---	---
Vivid	0-8	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	8-28	1-5	84-94	5-12	1.38-1.46	5.0-10.0	0.19-0.22	0.2-1.0	0.4-8.0
	28-150	65-70	17-26	5-13	1.47-1.64	10.0-50.0	0.04-0.08	0.2-1.0	0.4-8.0
20HID:									
Grandplateau	0-2	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	2-18	60-68	27-38	2-5	0.73-0.78	10.0-50.0	0.24-0.25	0.1-0.5	8.0-10
	18-27	20-35	60-75	5-12	0.82-0.86	5.0-10.0	0.32-0.34	0.4-1.1	6.0-10
	27-43	20-35	60-75	5-12	0.82-0.88	5.0-10.0	0.32-0.34	0.4-1.1	2.0-10
	43-120	20-35	60-75	5-12	0.82-0.88	5.0-10.0	0.28-0.32	0.4-1.2	2.0-10
	120-130	20-35	60-75	5-12	1.28-1.50	5.0-10.0	0.00-0.10	0.1-0.7	2.0-10
	130-200	---	---	---	---	0.0-0.1	---	---	---
Crillon	0-10	25-40	50-71	3-10	0.99-1.45	5.0-10.0	0.20-0.23	0.1-0.9	2.0-11
	10-20	50-65	33-48	2-5	1.43-1.58	10.0-50.0	0.09-0.14	0.0-0.4	0.5-6.0
	20-60	25-40	58-74	1-5	1.39-1.54	5.0-10.0	0.15-0.21	0.0-0.7	0.3-4.0
	60-80	---	---	---	---	0.0-0.9	---	---	---
	80-200	---	---	---	---	0.0-0.1	---	---	---
20HIE:									
Kashoto	0-18	---	---	---	0.14-0.27	100.0-700.0	0.30-0.58	---	50-100
	18-56	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	56-150	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20HIE:									
Kutskloh--------	0-9	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	9-21	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	21-30	23-35	58-74	3-15	1.08-1.16	5.0-10.0	0.19-0.22	0.0-1.2	8.0-10
	30-150	23-35	58-74	3-15	1.08-1.16	5.0-10.0	0.03-0.10	0.0-0.5	8.0-10
Wachusett-------	0-23	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	23-34	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	34-41	23-43	53-73	4-10	1.30-1.62	5.0-10.0	0.20-0.23	0.3-2.0	2.0-10
	41-60	25-38	50-70	5-25	1.03-1.10	5.0-10.0	0.13-0.19	0.2-2.7	2.0-9.0
	60-80	45-52	36-48	7-12	1.31-1.45	5.0-25.0	0.09-0.14	0.2-1.1	0.3-4.0
	80-85	64-65	25-31	5-10	1.54-1.56	10.0-50.0	0.07-0.09	0.2-0.9	0.2-4.0
	85-200	---	---	---	---	0.0-0.1	---	---	---
20HIF:									
Kashoto---------	0-18	---	---	---	0.14-0.27	100.0-700.0	0.30-0.58	---	50-100
	18-56	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	56-150	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
Wachusett-------	0-23	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	23-34	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	34-41	23-43	53-73	4-10	1.30-1.62	5.0-10.0	0.20-0.23	0.3-2.0	2.0-10
	41-60	25-38	50-70	5-25	1.03-1.10	5.0-10.0	0.13-0.19	0.2-2.7	2.0-9.0
	60-80	45-52	36-48	7-12	1.31-1.45	5.0-25.0	0.09-0.14	0.2-1.1	0.3-4.0
	80-85	64-65	25-31	5-10	1.54-1.56	10.0-50.0	0.07-0.09	0.2-0.9	0.2-4.0
	85-200	---	---	---	---	0.0-0.1	---	---	---
20HIN:									
Polkapenn-------	0-10	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	10-22	70-78	16-25	4-6	1.60-1.61	100.0-200.0	0.03-0.08	0.0-0.2	2.0-9.0
	22-42	70-78	16-25	4-6	1.48-1.56	100.0-200.0	0.03-0.08	0.0-0.3	2.0-9.0
	42-200	---	---	---	---	0.0-0.1	---	---	---
Nunatak---------	0-3	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	3-10	55-68	22-35	6-10	1.24-1.43	10.0-50.0	0.08-0.13	0.2-0.9	2.0-9.0
	10-36	55-70	20-35	5-10	1.50-1.56	10.0-100.0	0.02-0.07	0.0-0.5	0.5-6.0
	36-113	55-72	18-35	5-10	1.47-1.58	10.0-100.0	0.02-0.05	0.0-0.5	0.4-8.0
	113-200	---	---	---	---	0.0-0.1	---	---	---
20HIS:									
Lithic Cryorthents, rugged summit--	0-3	---	---	---	0.22-0.29	100.0-700.0	0.10-0.30	---	60-95
	3-6	40-51	29-50	7-20	1.18-1.24	4.0-14.0	0.09-0.18	0.2-2.3	5.0-10
	6-36	45-70	14-50	0-20	1.47-1.64	4.0-42.0	0.04-0.12	0.0-1.7	1.0-3.0
	36-200	---	---	---	---	---	---	---	---

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20HIS:									
Typic Humicryepts, high elevation	0-10	---	---	---	0.22-0.29	100.0-700.0	0.20-0.40	---	60-95
	10-28	55-70	20-40	0-10	1.33-1.56	14.0-42.0	0.06-0.09	0.0-0.6	6.0-10
	28-35	20-85	2-80	0-20	1.26-1.58	4.0-141.0	0.02-0.15	0.0-1.9	3.0-6.0
	35-51	20-85	10-70	0-20	1.34-1.59	4.0-141.0	0.04-0.14	0.0-1.8	1.0-3.0
	51-152	20-85	10-70	0-20	1.39-1.67	4.0-141.0	0.02-0.14	0.0-1.7	0.5-2.0
20IS1:									
Cenotaph	0-17	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	50-100
	17-25	65-69	19-23	10-12	1.38-1.41	50.0-100.0	0.08-0.14	0.5-1.0	2.0-9.0
	25-100	65-70	18-24	8-12	1.50-1.60	10.0-50.0	0.07-0.11	0.5-1.1	0.4-8.0
	100-150	72-80	14-25	3-7	1.52-1.61	1.0-10.0	0.03-0.07	0.1-0.6	0.1-2.5
20LF1:									
Abyss	0-13	35-52	32-50	13-20	1.38-1.55	5.0-25.0	0.12-0.16	1.2-2.3	0.4-8.0
	13-30	90-94	5-9	1-5	1.46-1.65	300.0-400.0	0.03-0.04	0.0-0.4	0.4-8.0
	30-150	90-94	5-9	1-5	1.46-1.65	300.0-400.0	0.03-0.04	0.0-0.4	0.4-8.0
Astrolable	0-25	65-71	0-12	23-30	1.53-1.75	1.0-5.0	0.00-0.05	2.1-4.0	0.3-2.0
	25-150	90-95	2-9	1-5	1.60-1.67	500.0-600.0	0.00-0.01	0.0-0.2	0.1-2.5
20MD1:									
Gustavus	0-12	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	12-33	55-75	20-40	2-5	1.52-1.74	10.0-50.0	0.09-0.11	0.0-0.4	0.1-2.5
	33-68	82-90	8-16	2-5	1.53-1.56	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	68-140	82-90	8-16	2-5	1.55-1.61	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	140-150	92-97	2-6	1-3	1.58-1.69	500.0-600.0	0.02-0.03	0.0-0.3	0.1-2.5
Perouse	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-98	0-7	1-3	1.58-1.67	300.0-400.0	0.03-0.05	0.0-0.2	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-99	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
20MF1:									
Geikie	0-7	40-50	38-50	8-12	1.42-1.54	5.0-25.0	0.14-0.19	0.4-1.2	0.2-3.0
	7-32	40-45	42-50	8-15	1.35-1.48	5.0-25.0	0.14-0.19	0.5-1.7	0.2-3.0
	32-48	10-20	61-78	12-20	1.38-1.41	5.0-10.0	0.17-0.20	1.2-2.5	0.4-8.0
	48-120	90-100	0-9	0-2	1.58-1.69	300.0-400.0	0.03-0.04	0.0-0.0	0.1-2.5
	120-150	90-100	0-8	0-2	1.62-1.70	300.0-400.0	0.02-0.03	0.0-0.0	0.1-2.5
Gustavus	0-12	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	12-33	55-75	20-40	2-5	1.52-1.74	10.0-50.0	0.09-0.11	0.0-0.4	0.1-2.5
	33-68	82-90	8-16	2-5	1.53-1.56	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	68-140	82-90	8-16	2-5	1.55-1.61	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	140-150	92-97	2-6	1-3	1.58-1.69	500.0-600.0	0.02-0.03	0.0-0.3	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20MF1:									
Scidmore--------	0-3	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	3-9	68-70	22-28	3-8	1.39-1.62	10.0-50.0	0.11-0.15	0.0-0.4	2.0-11
	9-31	82-85	10-15	3-5	1.53-1.70	100.0-200.0	0.04-0.07	0.0-0.3	0.1-2.5
	31-50	91-98	0-8	1-5	1.56-1.71	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	50-150	93-98	0-6	1-5	1.60-1.70	500.0-600.0	0.02-0.05	0.0-0.1	0.1-2.5
20MF2:									
Gustavus--------	0-12	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	12-33	55-75	20-40	2-5	1.52-1.74	10.0-50.0	0.09-0.11	0.0-0.4	0.1-2.5
	33-68	82-90	8-16	2-5	1.53-1.56	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	68-140	82-90	8-16	2-5	1.55-1.61	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	140-150	92-97	2-6	1-3	1.58-1.69	500.0-600.0	0.02-0.03	0.0-0.3	0.1-2.5
Geikie----------	0-7	40-50	38-50	8-12	1.42-1.54	5.0-25.0	0.14-0.19	0.4-1.2	0.2-3.0
	7-32	40-45	42-50	8-15	1.35-1.48	5.0-25.0	0.14-0.19	0.5-1.7	0.2-3.0
	32-48	10-20	61-78	12-20	1.38-1.41	5.0-10.0	0.17-0.20	1.2-2.5	0.4-8.0
	48-120	90-100	0-9	0-2	1.58-1.69	300.0-400.0	0.03-0.04	0.0-0.0	0.1-2.5
	120-150	90-100	0-8	0-2	1.62-1.70	300.0-400.0	0.02-0.03	0.0-0.0	0.1-2.5
20MT1:									
Bearisland------	0-2	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	2-24	75-88	2-20	5-10	1.61-1.63	100.0-200.0	0.01-0.04	0.1-0.6	0.1-2.5
	24-150	75-88	0-16	8-12	1.56-1.71	100.0-200.0	0.01-0.04	0.2-0.7	0.1-2.5
Kadachan--------	0-11	86-93	6-13	1-5	1.49-1.60	100.0-200.0	0.04-0.07	0.0-0.4	0.1-2.5
	11-18	86-93	6-13	1-5	1.49-1.60	100.0-200.0	0.01-0.05	0.0-0.2	0.1-2.5
	18-150	86-93	4-13	1-5	1.52-1.56	100.0-200.0	0.00-0.01	0.0-0.1	0.1-2.5
20MT2:									
Escures---------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-10	60-70	22-36	4-10	1.34-1.61	10.0-100.0	0.04-0.08	0.2-0.9	0.4-8.0
	10-25	60-70	20-30	4-10	1.46-1.61	10.0-100.0	0.03-0.06	0.1-0.8	0.4-8.0
	25-54	60-70	20-30	4-10	1.46-1.61	10.0-100.0	0.03-0.06	0.1-0.7	0.4-8.0
	54-200	---	---	---	---	0.0-0.1	---	---	---
Polkapenn-------	0-10	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	10-22	70-78	16-25	4-6	1.60-1.61	100.0-200.0	0.03-0.08	0.0-0.2	2.0-9.0
	22-42	70-78	16-25	4-6	1.48-1.56	100.0-200.0	0.03-0.08	0.0-0.3	2.0-9.0
	42-200	---	---	---	---	0.0-0.1	---	---	---
Nunatak---------	0-3	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	3-10	55-68	22-35	6-10	1.24-1.43	10.0-50.0	0.08-0.13	0.2-0.9	2.0-9.0
	10-36	55-70	20-35	5-10	1.50-1.56	10.0-100.0	0.02-0.07	0.0-0.5	0.5-6.0
	36-113	55-72	18-35	5-10	1.47-1.58	10.0-100.0	0.02-0.05	0.0-0.5	0.4-8.0
	113-200	---	---	---	---	0.0-0.1	---	---	---

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20MT3:									
Polkapenn-------	0-10	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	10-22	70-78	16-25	4-6	1.60-1.61	100.0-200.0	0.03-0.08	0.0-0.2	2.0-9.0
	22-42	70-78	16-25	4-6	1.48-1.56	100.0-200.0	0.03-0.08	0.0-0.3	2.0-9.0
	42-200	---	---	---	---	0.0-0.1	---	---	---
Bearisland------	0-2	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	2-24	75-88	2-20	5-10	1.61-1.63	100.0-200.0	0.01-0.04	0.1-0.6	0.1-2.5
	24-150	75-88	0-16	8-12	1.56-1.71	100.0-200.0	0.01-0.04	0.2-0.7	0.1-2.5
Enigma----------	0-10	65-70	20-27	5-10	1.39-1.63	10.0-50.0	0.04-0.10	0.0-0.9	2.0-9.0
	10-62	55-70	22-42	2-8	1.54-1.59	10.0-100.0	0.01-0.03	0.0-0.3	0.4-8.0
	62-200	---	---	---	---	0.0-0.1	---	---	---
20MT4:									
Seclusion-------	0-9	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	9-15	66-68	22-29	5-10	1.39-1.48	10.0-100.0	0.05-0.09	0.2-0.5	1.0-10
	15-40	68-70	22-27	5-8	1.46-1.58	10.0-100.0	0.04-0.07	0.2-0.5	0.4-8.0
	40-200	---	---	---	---	0.0-0.1	---	---	---
20MT5:									
Seclusion-------	0-9	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	9-15	66-68	22-29	5-10	1.39-1.48	10.0-100.0	0.05-0.09	0.2-0.5	1.0-10
	15-40	68-70	22-27	5-8	1.46-1.58	10.0-100.0	0.04-0.07	0.2-0.5	0.4-8.0
	40-200	---	---	---	---	0.0-0.1	---	---	---
Skarn-----------	0-8	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	8-14	60-70	14-25	15-18	1.30-1.49	100.0-200.0	0.08-0.13	0.9-1.5	2.0-9.0
	14-60	65-66	14-15	20-21	1.52-1.53	1.0-5.0	0.04-0.08	1.0-1.7	0.8-5.0
	60-104	64-66	13-16	20-22	1.53-1.56	1.0-5.0	0.04-0.08	1.0-1.9	0.8-5.0
	104-200	---	---	---	---	0.0-0.1	---	---	---
20MT6:									
Bergbay---------	0-8	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	8-37	55-65	27-41	4-8	1.30-1.46	10.0-100.0	0.08-0.13	0.1-0.6	2.0-10
	37-70	65-70	22-28	4-8	1.56-1.64	10.0-100.0	0.02-0.05	0.1-0.6	0.2-4.0
	70-200	---	---	---	---	0.0-0.1	---	---	---
Boussole--------	0-10	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	10-28	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	28-41	40-46	50-54	4-8	1.08-1.46	5.0-10.0	0.20-0.23	0.2-0.7	2.0-11
	41-51	50-60	36-42	4-8	1.31-1.52	10.0-50.0	0.08-0.12	0.1-1.4	1.2-9.5
	51-200	---	---	---	---	0.0-0.1	---	---	---
Toyatte---------	0-16	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	16-32	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	32-42	20-30	60-75	5-10	1.38-1.53	5.0-10.0	0.15-0.20	0.3-1.4	0.4-8.0
	42-200	---	---	---	---	0.0-0.1	---	---	---

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20MT7:									
Foad------------	0-5	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	5-10	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	10-15	27-35	56-63	5-10	1.21-1.33	5.0-10.0	0.07-0.14	0.0-0.4	6.0-10
	15-84	27-35	55-65	5-10	0.97-1.03	5.0-10.0	0.08-0.14	0.0-0.3	6.0-10
	84-200	---	---	---	---	0.0-0.0	---	---	---
Abdallah--------	0-3	---	---	---	0.09-0.27	100.0-700.0	0.00-0.00	---	50-100
	3-20	63-67	26-34	3-7	1.33-1.46	10.0-50.0	0.03-0.04	0.0-0.2	2.0-9.0
	20-150	63-69	24-32	3-7	1.40-1.59	10.0-50.0	0.01-0.04	0.0-0.2	0.4-8.0
Justicecreek----	0-11	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	11-22	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	22-200	---	---	---	---	0.0-0.1	---	---	---
20MTC:									
Skarn-----------	0-8	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	8-14	60-70	14-25	15-18	1.30-1.49	100.0-200.0	0.08-0.13	0.9-1.5	2.0-9.0
	14-60	65-66	14-15	20-21	1.52-1.53	1.0-5.0	0.04-0.08	1.0-1.7	0.8-5.0
	60-104	64-66	13-16	20-22	1.53-1.56	1.0-5.0	0.04-0.08	1.0-1.9	0.8-5.0
	104-200	---	---	---	---	0.0-0.1	---	---	---
Polkapenn-------	0-10	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	10-22	70-78	16-25	4-6	1.60-1.61	100.0-200.0	0.03-0.08	0.0-0.2	2.0-9.0
	22-42	70-78	16-25	4-6	1.48-1.56	100.0-200.0	0.03-0.08	0.0-0.3	2.0-9.0
	42-200	---	---	---	---	0.0-0.1	---	---	---
Kadachan--------	0-11	86-93	6-13	1-5	1.49-1.60	100.0-200.0	0.04-0.07	0.0-0.4	0.1-2.5
	11-18	86-93	6-13	1-5	1.49-1.60	100.0-200.0	0.01-0.05	0.0-0.2	0.1-2.5
	18-150	86-93	4-13	1-5	1.52-1.56	100.0-200.0	0.00-0.01	0.0-0.1	0.1-2.5
20MTE:									
Wachusett-------	0-23	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	23-34	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	34-41	23-43	53-73	4-10	1.30-1.62	5.0-10.0	0.20-0.23	0.3-2.0	2.0-10
	41-60	25-38	50-70	5-25	1.03-1.10	5.0-10.0	0.13-0.19	0.2-2.7	2.0-9.0
	60-80	45-52	36-48	7-12	1.31-1.45	5.0-25.0	0.09-0.14	0.2-1.1	0.3-4.0
	80-85	64-65	25-31	5-10	1.54-1.56	10.0-50.0	0.07-0.09	0.2-0.9	0.2-4.0
	85-200	---	---	---	---	0.0-0.1	---	---	---
Maquinna--------	0-10	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	10-33	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	33-75	5-20	65-86	5-15	1.12-1.47	5.0-10.0	0.13-0.18	0.3-0.8	2.0-9.0
	75-107	10-25	60-80	10-18	1.32-1.39	5.0-10.0	0.09-0.12	0.3-1.5	0.4-8.0
	107-200	---	---	---	---	0.0-0.1	---	---	---

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20MTE:									
Boussole--------	0-10	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	10-28	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	28-41	40-46	50-54	4-8	1.08-1.46	5.0-10.0	0.20-0.23	0.2-0.7	2.0-11
	41-51	50-60	36-42	4-8	1.31-1.52	10.0-50.0	0.08-0.12	0.1-1.4	1.2-9.5
	51-200	---	---	---	---	0.0-0.1	---	---	---
20MTF:									
Wachusett-------	0-23	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	23-34	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	34-41	23-43	53-73	4-10	1.30-1.62	5.0-10.0	0.20-0.23	0.3-2.0	2.0-10
	41-60	25-38	50-70	5-25	1.03-1.10	5.0-10.0	0.13-0.19	0.2-2.7	2.0-9.0
	60-80	45-52	36-48	7-12	1.31-1.45	5.0-25.0	0.09-0.14	0.2-1.1	0.3-4.0
	80-85	64-65	25-31	5-10	1.54-1.56	10.0-50.0	0.07-0.09	0.2-0.9	0.2-4.0
	85-200	---	---	---	---	0.0-0.1	---	---	---
Maquinna--------	0-10	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	10-33	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	33-75	5-20	65-86	5-15	1.12-1.47	5.0-10.0	0.13-0.18	0.3-0.8	2.0-9.0
	75-107	10-25	60-80	10-18	1.32-1.39	5.0-10.0	0.09-0.12	0.3-1.5	0.4-8.0
	107-200	---	---	---	---	0.0-0.1	---	---	---
Enigma----------	0-10	65-70	20-27	5-10	1.39-1.63	10.0-50.0	0.04-0.10	0.0-0.9	2.0-9.0
	10-62	55-70	22-42	2-8	1.54-1.59	10.0-100.0	0.01-0.03	0.0-0.3	0.4-8.0
	62-200	---	---	---	---	0.0-0.1	---	---	---
20OC1:									
Scidmore--------	0-3	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	3-9	68-70	22-28	3-8	1.39-1.62	10.0-50.0	0.11-0.15	0.0-0.4	2.0-11
	9-31	82-85	10-15	3-5	1.53-1.70	100.0-200.0	0.04-0.07	0.0-0.3	0.1-2.5
	31-50	91-98	0-8	1-5	1.56-1.71	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	50-150	93-98	0-6	1-5	1.60-1.70	500.0-600.0	0.02-0.05	0.0-0.1	0.1-2.5
Perouse, frequently ponded---------	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-97	0-8	1-3	1.59-1.67	300.0-400.0	0.03-0.05	0.0-0.2	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-100	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
20OD1:									
Gustavus--------	0-12	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	12-33	55-75	20-40	2-5	1.52-1.74	10.0-50.0	0.09-0.11	0.0-0.4	0.1-2.5
	33-68	82-90	8-16	2-5	1.53-1.56	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	68-140	82-90	8-16	2-5	1.55-1.61	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	140-150	92-97	2-6	1-3	1.58-1.69	500.0-600.0	0.02-0.03	0.0-0.3	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20OD1:									
Lamplugh--------	0-15	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	15-19	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	19-21	55-65	25-37	8-12	1.28-1.50	10.0-50.0	0.09-0.14	0.6-2.2	2.0-10
	21-35	55-65	20-36	8-15	1.44-1.55	10.0-50.0	0.09-0.14	0.4-1.8	0.5-6.0
	35-54	10-20	50-63	27-30	1.17-1.33	1.0-5.0	0.14-0.18	3.9-4.8	1.0-7.0
	54-70	60-68	20-34	5-12	1.45-1.59	10.0-50.0	0.11-0.14	0.4-1.3	0.4-8.0
	70-150	8-20	50-65	27-30	1.34-1.45	1.0-5.0	0.14-0.18	3.8-4.7	0.3-2.0
20ODF:									
Glacierbay------	0-8	5-18	70-88	5-15	0.99-1.44	1.0-7.5	0.20-0.23	0.3-1.5	2.0-11
	8-25	5-20	66-88	5-18	1.35-1.47	1.0-10.0	0.17-0.22	0.3-1.9	0.1-2.5
	25-58	5-25	56-77	18-24	1.31-1.39	1.0-14.0	0.17-0.20	1.8-3.3	0.1-2.0
	58-100	92-97	0-6	1-3	1.62-1.69	1.5-705.0	0.03-0.05	0.0-0.1	0.1-2.0
	100-130	94-97	0-4	1-3	1.56-1.66	1.5-705.0	0.04-0.05	0.0-0.1	0.1-2.0
	130-150	94-98	0-4	1-3	1.63-1.72	1.5-705.0	0.03-0.04	0.0-0.1	0.1-2.0
Geikie----------	0-7	40-50	38-50	8-12	1.42-1.54	5.0-25.0	0.14-0.19	0.4-1.2	0.2-3.0
	7-32	40-45	42-50	8-15	1.35-1.48	5.0-25.0	0.14-0.19	0.5-1.7	0.2-3.0
	32-48	10-20	61-78	12-20	1.38-1.41	5.0-10.0	0.17-0.20	1.2-2.5	0.4-8.0
	48-120	90-100	0-9	0-2	1.58-1.69	300.0-400.0	0.03-0.04	0.0-0.0	0.1-2.5
	120-150	90-100	0-8	0-2	1.62-1.70	300.0-400.0	0.02-0.03	0.0-0.0	0.1-2.5
20OP1:									
Fossil----------	0-10	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	10-27	95-98	1-4	0-1	1.59-1.59	500.0-600.0	0.01-0.04	0.0-0.0	0.1-2.5
	27-50	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.01-0.03	0.0-0.0	0.1-2.5
	50-95	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
	95-150	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
Tyeen-----------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-12	65-70	18-28	5-12	1.39-1.60	10.0-50.0	0.03-0.07	0.1-0.7	2.0-9.0
	12-50	65-70	18-28	5-12	1.55-1.61	10.0-100.0	0.02-0.05	0.1-0.8	0.3-4.0
	50-150	65-70	14-27	5-16	1.47-1.66	10.0-50.0	0.04-0.07	0.2-1.1	0.4-8.0
Vivid-----------	0-8	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	8-28	1-5	84-94	5-12	1.38-1.46	5.0-10.0	0.19-0.22	0.2-1.0	0.4-8.0
	28-150	65-70	17-26	5-13	1.47-1.64	10.0-50.0	0.04-0.08	0.2-1.0	0.4-8.0
20OP4:									
Kashoto---------	0-18	---	---	---	0.14-0.27	100.0-700.0	0.30-0.58	---	50-100
	18-56	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	56-150	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
Annoksek--------	0-3	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	3-12	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	12-30	54-60	25-36	10-15	1.47-1.51	10.0-100.0	0.09-0.10	0.8-1.2	0.4-8.0
	30-200	0	0	0	---	0.0-0.1	---	---	---

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20OP4:									
Bulky-----------	0-5	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	5-25	63-68	25-34	3-8	1.41-1.51	10.0-100.0	0.08-0.11	0.0-1.5	0.4-8.0
	25-50	25-45	50-70	5-17	1.36-1.45	5.0-10.0	0.16-0.19	0.3-1.8	0.4-8.0
	50-150	90-100	0-10	0-2	1.60-1.68	300.0-400.0	0.03-0.04	0.0-0.0	0.1-2.5
20OP5:									
Fossil----------	0-10	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	10-27	95-98	1-4	0-1	1.59-1.59	500.0-600.0	0.01-0.04	0.0-0.0	0.1-2.5
	27-50	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.01-0.03	0.0-0.0	0.1-2.5
	50-95	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
	95-150	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
Tyeen-----------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-12	65-70	18-28	5-12	1.39-1.60	10.0-50.0	0.03-0.07	0.1-0.7	2.0-9.0
	12-50	65-70	18-28	5-12	1.55-1.61	10.0-100.0	0.02-0.05	0.1-0.8	0.3-4.0
	50-150	65-70	14-27	5-16	1.47-1.66	10.0-50.0	0.04-0.07	0.2-1.1	0.4-8.0
Vivid-----------	0-8	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	8-28	1-5	84-94	5-12	1.38-1.46	5.0-10.0	0.19-0.22	0.2-1.0	0.4-8.0
	28-150	65-70	17-26	5-13	1.47-1.64	10.0-50.0	0.04-0.08	0.2-1.0	0.4-8.0
20OP6:									
Bulky-----------	0-5	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	5-25	63-68	25-34	3-8	1.41-1.51	10.0-100.0	0.08-0.11	0.0-1.5	0.4-8.0
	25-50	25-45	50-70	5-17	1.36-1.45	5.0-10.0	0.16-0.19	0.3-1.8	0.4-8.0
	50-150	90-100	0-10	0-2	1.60-1.68	300.0-400.0	0.03-0.04	0.0-0.0	0.1-2.5
Bertha----------	0-3	---	---	---	0.18-0.27	100.0-700.0	0.00-0.00	---	40-100
	3-13	90-100	0-9	0-1	1.58-1.71	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
	13-22	90-100	0-9	0-1	1.58-1.71	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
	22-150	90-100	0-9	0-1	1.58-1.71	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
Icy-------------	0-20	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	20-89	10-14	60-70	18-27	1.34-1.43	5.0-10.0	0.17-0.20	1.9-4.1	0.4-8.0
	89-119	10-14	60-71	18-27	1.35-1.48	10.0-50.0	0.17-0.20	1.9-4.1	0.4-8.0
	119-150	70-85	10-30	0-5	1.50-1.62	100.0-200.0	0.04-0.05	0.0-0.4	0.1-2.5
20OPE:									
Tyeen-----------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-12	65-70	18-28	5-12	1.39-1.60	10.0-50.0	0.03-0.07	0.1-0.7	2.0-9.0
	12-50	65-70	18-28	5-12	1.55-1.61	10.0-100.0	0.02-0.05	0.1-0.8	0.3-4.0
	50-150	65-70	14-27	5-16	1.47-1.66	10.0-50.0	0.04-0.07	0.2-1.1	0.4-8.0

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20OPE:									
Shagcove	0-3	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	3-7	60-68	23-34	5-9	1.35-1.45	10.0-50.0	0.08-0.14	0.3-0.8	2.0-9.0
	7-49	75-87	7-22	3-7	1.54-1.70	100.0-200.0	0.01-0.04	0.1-0.6	0.1-2.5
	49-60	75-87	7-22	3-7	1.54-1.70	100.0-200.0	0.01-0.04	0.1-0.6	0.1-2.5
	60-150	78-87	9-22	0-5	1.49-1.52	100.0-200.0	0.01-0.05	0.0-0.2	0.1-2.5
Puffin	0-70	80-85	8-18	0-7	1.59-1.68	100.0-200.0	0.00-0.02	0.0-0.2	0.1-2.5
	70-150	90-97	0-10	0-5	1.63-1.67	500.0-600.0	0.00-0.02	0.0-0.2	0.1-2.5
20OV1:									
Perouse, frequently ponded	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-97	0-8	1-3	1.59-1.67	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-100	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.0	0.1-2.5
Perouse	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-98	0-7	1-3	1.58-1.67	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-99	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.0	0.1-2.5
20OW1:									
Perouse	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-98	0-7	1-3	1.58-1.67	300.0-400.0	0.03-0.05	0.0-0.2	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-99	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
Gustavus	0-12	---	---	---	0.09-0.27	100.0-700.0	0.20-0.40	---	50-100
	12-33	55-75	20-40	2-5	1.52-1.74	10.0-50.0	0.09-0.11	0.0-0.4	0.1-2.5
	33-68	82-90	8-16	2-5	1.53-1.56	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	68-140	82-90	8-16	2-5	1.55-1.61	100.0-200.0	0.05-0.06	0.0-0.4	0.1-2.5
	140-150	92-97	2-6	1-3	1.58-1.69	500.0-600.0	0.02-0.03	0.0-0.3	0.1-2.5
Perouse, frequently ponded	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-97	0-8	1-3	1.59-1.67	300.0-400.0	0.03-0.05	0.0-0.2	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-100	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20OWF:									
Fairweather-----	0-2	---	---	---	0.14-0.26	5.0-25.0	0.30-0.55	---	60-100
	2-5	8-22	69-80	6-15	0.95-1.49	1.0-7.5	0.19-0.23	0.4-1.5	2.0-11
	5-38	8-14	71-80	6-15	1.34-1.40	1.0-14.0	0.13-0.20	0.5-1.6	0.5-6.0
	38-150	94-98	1-5	1-3	1.59-1.67	425.0-705.0	0.02-0.04	0.0-0.1	0.1-2.5
Icy-------------	0-20	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	20-89	10-14	60-70	18-27	1.34-1.43	5.0-10.0	0.17-0.20	1.9-4.1	0.4-8.0
	89-119	10-14	60-71	18-27	1.35-1.48	10.0-50.0	0.17-0.20	1.9-4.1	0.4-8.0
	119-150	70-85	10-30	0-5	1.50-1.62	100.0-200.0	0.04-0.05	0.0-0.4	0.1-2.5
20PL1:									
Tyeen-----------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-12	65-70	18-28	5-12	1.39-1.60	10.0-50.0	0.03-0.07	0.1-0.7	2.0-9.0
	12-50	65-70	18-28	5-12	1.55-1.61	10.0-100.0	0.02-0.05	0.1-0.8	0.3-4.0
	50-150	65-70	14-27	5-16	1.47-1.66	10.0-50.0	0.04-0.07	0.2-1.1	0.4-8.0
Cenotaph--------	0-17	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	50-100
	17-25	65-69	19-23	10-12	1.38-1.41	50.0-100.0	0.08-0.14	0.5-1.0	2.0-9.0
	25-100	65-70	18-24	8-12	1.50-1.60	10.0-50.0	0.07-0.11	0.5-1.1	0.4-8.0
	100-150	72-80	14-25	3-7	1.52-1.61	1.0-10.0	0.03-0.07	0.1-0.6	0.1-2.5
Fossil----------	0-10	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	10-27	95-98	1-4	0-1	1.59-1.59	500.0-600.0	0.01-0.04	0.0-0.0	0.1-2.5
	27-50	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.01-0.03	0.0-0.0	0.1-2.5
	50-95	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
	95-150	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
20PL2:									
Tyeen-----------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-12	65-70	18-28	5-12	1.39-1.60	10.0-50.0	0.03-0.07	0.1-0.7	2.0-9.0
	12-50	65-70	18-28	5-12	1.55-1.61	10.0-100.0	0.02-0.05	0.1-0.8	0.3-4.0
	50-150	65-70	14-27	5-16	1.47-1.66	10.0-50.0	0.04-0.07	0.2-1.1	0.4-8.0
Fossil----------	0-10	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	10-27	95-98	1-4	0-1	1.59-1.59	500.0-600.0	0.01-0.04	0.0-0.0	0.1-2.5
	27-50	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.01-0.03	0.0-0.0	0.1-2.5
	50-95	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
	95-150	95-98	1-4	0-1	1.67-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
Fingers---------	0-2	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	2-8	80-85	8-18	1-7	1.59-1.61	100.0-200.0	0.01-0.04	0.0-0.6	0.1-2.5
	8-43	90-98	0-7	2-5	1.67-1.68	500.0-600.0	0.01-0.01	0.0-0.4	0.1-2.5
	43-150	90-98	0-7	2-5	1.67-1.68	500.0-600.0	0.00-0.01	0.0-0.4	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20PL3:									
Kashoto---------	0-18	---	---	---	0.14-0.27	100.0-700.0	0.30-0.58	---	50-100
	18-56	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	56-150	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
Annoksek--------	0-3	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	3-12	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	12-30	54-60	25-36	10-15	1.47-1.51	10.0-100.0	0.09-0.10	0.8-1.2	0.4-8.0
	30-200	0	0	0	---	0.0-0.1	---	---	---
Ancon-----------	0-8	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	8-21	55-60	30-39	5-10	1.24-1.37	50.0-100.0	0.13-0.13	0.3-0.9	2.0-11
	21-24	55-60	30-39	5-10	1.26-1.64	50.0-100.0	0.10-0.15	0.3-0.9	0.5-11
	24-53	55-60	30-39	5-10	1.06-1.36	50.0-100.0	0.13-0.15	2.8-4.6	0.5-6.0
	53-103	55-68	18-32	8-14	1.07-1.37	50.0-100.0	0.07-0.10	0.6-1.4	0.5-6.0
	103-200	0	0	0	---	0.0-0.1	---	---	---
20PL6:									
Tidalwave-------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	4-16	55-58	38-42	3-5	1.30-1.51	10.0-50.0	0.14-0.17	0.1-0.3	2.0-11
	16-24	58-63	32-38	3-5	1.55-1.57	10.0-50.0	0.10-0.15	0.0-0.3	0.5-6.0
	24-49	58-65	30-38	3-5	1.45-1.60	10.0-50.0	0.09-0.14	0.0-0.3	0.3-4.0
	49-150	90-95	4-9	0-1	1.67-1.68	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
Drybay----------	0-2	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	2-11	40-45	50-57	3-10	1.10-1.45	5.0-10.0	0.20-0.24	0.1-0.9	2.0-11
	11-24	65-70	22-32	3-10	1.45-1.59	10.0-100.0	0.02-0.06	0.0-0.6	0.4-8.0
	24-60	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
	60-150	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
Puffin----------	0-70	80-85	8-18	0-7	1.59-1.68	100.0-200.0	0.00-0.02	0.0-0.2	0.1-2.5
	70-150	90-97	0-10	0-5	1.63-1.67	500.0-600.0	0.00-0.02	0.0-0.2	0.1-2.5
20PLD:									
Typic Cryaquents, sandy----------	0-7	---	---	---	0.22-0.29	5.0-25.0	0.30-0.50	---	60-95
	7-15	10-70	10-77	0-20	1.08-1.46	4.0-42.0	0.10-0.22	0.0-2.3	6.0-10
	15-32	10-100	0-70	0-20	1.40-1.70	4.0-141.0	0.02-0.18	0.0-2.1	0.5-2.0
	32-51	70-100	0-24	0-10	1.53-1.68	42.0-705.0	0.01-0.06	0.0-0.9	0.0-2.0
	51-72	70-100	0-24	0-10	1.53-1.68	42.0-705.0	0.01-0.06	0.0-0.9	0.0-2.0
	72-152	70-100	0-24	0-10	1.53-1.68	42.0-705.0	0.01-0.06	0.0-0.9	0.0-2.0

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20PLD:									
Typic Cryorthents, sandy, rarely flooded--------	0-8	---	---	---	0.22-0.29	100.0-700.0	0.30-0.53	---	60-95
	8-20	50-100	0-40	0-10	1.35-1.56	14.0-141.0	0.03-0.11	0.0-0.9	4.0-8.0
	20-46	70-100	0-25	0-5	1.53-1.69	42.0-141.0	0.02-0.06	0.0-0.4	0.0-2.0
	46-49	45-85	14-50	0-10	1.49-1.55	4.0-141.0	0.04-0.13	0.0-0.9	0.0-2.0
	49-152	70-100	0-26	0-5	1.52-1.64	42.0-705.0	0.01-0.06	0.0-0.4	0.0-2.0
20RW2:									
Oxyaquic Cryorthents, sandy or gravelly-------	0-8	---	---	---	0.22-0.29	100.0-700.0	0.20-0.40	---	60-95
	8-15	50-100	0-40	0-10	1.33-1.51	14.0-141.0	0.02-0.08	0.0-0.6	6.0-10
	15-38	70-100	0-26	0-5	1.52-1.62	42.0-705.0	0.00-0.04	0.0-0.2	0.5-2.0
	38-152	70-100	0-26	0-5	1.52-1.62	42.0-705.0	0.00-0.04	0.0-0.2	0.5-2.0
20SC:									
Typic Cryopsamments, rarely flooded-	0-5	---	---	---	0.22-0.29	100.0-700.0	0.10-0.30	---	60-95
	5-23	85-100	0-14	0-5	1.56-1.66	42.0-141.0	0.03-0.06	0.0-0.4	0.5-5.0
	23-152	75-100	0-20	0-5	1.56-1.68	42.0-141.0	0.04-0.06	0.0-0.3	0.0-1.0
20TE2:									
Tidalwave-------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	4-16	55-58	38-42	3-5	1.30-1.51	10.0-50.0	0.14-0.17	0.1-0.3	2.0-11
	16-24	58-63	32-38	3-5	1.55-1.57	10.0-50.0	0.10-0.15	0.0-0.3	0.5-6.0
	24-49	58-65	30-38	3-5	1.45-1.60	10.0-50.0	0.09-0.14	0.0-0.3	0.3-4.0
	49-150	90-95	4-9	0-1	1.67-1.68	500.0-600.0	0.02-0.05	0.0-0.0	0.1-2.5
Drybay----------	0-2	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	2-11	40-45	50-57	3-10	1.10-1.45	5.0-10.0	0.20-0.24	0.1-0.9	2.0-11
	11-24	65-70	22-32	3-10	1.45-1.59	10.0-100.0	0.02-0.06	0.0-0.6	0.4-8.0
	24-60	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
	60-150	95-99	0-5	0-2	1.64-1.70	500.0-600.0	0.00-0.02	0.0-0.0	0.1-2.5
20TF1:									
Astrolable------	0-25	65-71	0-12	23-30	1.53-1.75	1.0-5.0	0.00-0.05	2.1-4.0	0.3-2.0
	25-150	90-95	2-9	1-5	1.60-1.67	500.0-600.0	0.00-0.01	0.0-0.2	0.1-2.5
Murkbay---------	0-1	---	---	---	0.20-0.26	100.0-700.0	0.10-0.30	---	60-95
	1-3	70-90	7-29	1-3	1.60-1.62	100.0-200.0	0.04-0.07	0.0-0.1	0.1-2.5
	3-25	90-100	0-10	0-3	1.56-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	25-80	90-100	0-10	0-3	1.56-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	80-125	90-98	2-10	0-3	1.50-1.69	300.0-400.0	0.04-0.07	0.0-0.1	0.1-2.5
	125-150	90-100	0-10	0-3	1.56-1.69	300.0-400.0	0.02-0.04	0.0-0.1	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20TF3:									
Astrolable------	0-25	65-71	0-12	23-30	1.53-1.75	1.0-5.0	0.00-0.05	2.1-4.0	0.3-2.0
	25-150	90-95	2-9	1-5	1.60-1.67	500.0-600.0	0.00-0.01	0.0-0.2	0.1-2.5
Beartrack-------	0-2	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	60-95
	2-21	10-19	72-82	8-11	1.33-1.52	5.0-10.0	0.11-0.18	0.7-1.1	0.4-8.0
	21-40	17-19	69-74	7-12	1.33-1.43	5.0-10.0	0.11-0.18	0.6-1.3	0.4-8.0
	40-150	17-19	69-74	7-12	1.33-1.43	5.0-10.0	0.11-0.18	0.6-1.3	0.4-8.0
20TH1:									
Ibach-----------	0-9	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	65-100
	9-27	20-38	55-75	3-8	1.16-1.59	1.0-7.5	0.04-0.18	0.0-0.5	2.0-9.0
	27-56	53-75	18-42	3-8	1.48-1.62	2.5-14.0	0.01-0.04	0.0-0.5	0.4-8.0
	56-73	53-75	18-42	3-8	1.49-1.64	2.5-14.0	0.01-0.04	0.0-0.4	0.4-6.0
	73-150	55-75	18-38	3-15	1.51-1.61	2.5-14.0	0.02-0.04	0.0-0.6	0.4-4.0
Lamplugh--------	0-15	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	15-19	---	---	---	0.18-0.27	100.0-700.0	0.30-0.58	---	40-100
	19-21	55-65	25-37	8-12	1.28-1.50	10.0-50.0	0.09-0.14	0.6-2.2	2.0-10
	21-35	55-65	20-36	8-15	1.44-1.55	10.0-50.0	0.09-0.14	0.4-1.9	0.5-6.0
	35-54	10-20	50-63	27-30	1.17-1.33	1.0-5.0	0.14-0.18	3.9-4.8	1.0-7.0
	54-70	60-68	20-34	5-12	1.45-1.59	10.0-50.0	0.11-0.14	0.4-1.3	0.4-8.0
	70-150	8-20	50-65	27-30	1.34-1.45	1.0-5.0	0.14-0.18	3.8-4.7	0.3-2.0
Bartlettcove----	0-12	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	12-14	84-86	11-14	1-3	1.50-1.63	100.0-200.0	0.06-0.13	0.0-0.3	0.1-2.5
	14-30	84-86	11-14	1-3	1.32-1.50	100.0-200.0	0.06-0.13	0.0-0.1	0.1-2.5
	30-45	84-86	11-15	1-3	1.51-1.56	100.0-200.0	0.06-0.13	0.0-0.1	0.1-2.5
	45-150	92-98	0-7	1-3	1.53-1.61	300.0-400.0	0.04-0.05	0.0-0.1	0.1-2.5
20UM1:									
Bearisland------	0-2	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	2-24	75-88	2-20	5-10	1.61-1.63	100.0-200.0	0.01-0.04	0.1-0.6	0.1-2.5
	24-150	75-88	0-16	8-12	1.56-1.71	100.0-200.0	0.01-0.04	0.2-0.7	0.1-2.5
20UM2:									
Bearisland------	0-2	---	---	---	0.09-0.27	100.0-700.0	0.10-0.30	---	50-100
	2-24	75-88	2-20	5-10	1.61-1.63	100.0-200.0	0.01-0.04	0.1-0.6	0.1-2.5
	24-150	75-88	0-16	8-12	1.56-1.71	100.0-200.0	0.01-0.04	0.2-0.7	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
20VBA:									
Typic Cryofluvents---	0-10	---	---	---	0.22-0.29	100.0-700.0	0.20-0.40	---	60-95
	10-13	10-100	0-87	0-20	1.32-1.50	4.0-141.0	0.02-0.19	0.0-2.3	4.0-8.0
	13-18	70-100	0-30	0-5	1.53-1.60	42.0-141.0	0.01-0.06	0.0-0.4	0.5-2.0
	18-23	10-100	0-87	0-20	1.32-1.50	4.0-141.0	0.02-0.19	0.0-2.3	4.0-8.0
	23-31	10-100	0-70	0-20	1.50-1.53	4.0-141.0	0.02-0.18	0.0-2.2	2.0-4.0
	31-36	70-100	0-25	0-5	1.53-1.66	42.0-141.0	0.01-0.06	0.0-0.4	0.5-2.0
	36-49	10-100	0-70	0-20	1.25-1.56	4.0-141.0	0.02-0.18	0.0-2.3	2.0-6.0
	49-152	70-100	0-25	0-5	1.53-1.66	42.0-141.0	0.01-0.06	0.0-0.4	0.5-2.0
Aquic Dystrocryepts, silty----------	0-2	---	---	---	0.22-0.29	100.0-700.0	0.10-0.30	---	60-95
	2-3	---	---	---	0.22-0.29	100.0-700.0	0.30-0.52	---	60-95
	3-18	10-100	0-88	0-20	1.20-1.50	4.0-141.0	0.07-0.22	0.0-2.3	6.0-10
	18-34	10-75	5-80	0-20	1.45-1.55	4.0-42.0	0.10-0.18	0.0-0.1	2.0-6.0
	34-50	10-75	5-80	0-20	1.47-1.69	4.0-141.0	0.09-0.18	0.0-2.3	0.5-2.0
	50-67	10-75	25-88	0-20	1.40-1.51	4.0-141.0	0.09-0.19	0.0-2.3	0.5-2.0
	67-152	10-75	25-88	0-20	1.40-1.55	4.0-141.0	0.09-0.19	0.0-2.3	0.0-2.0
20WD1:									
Perouse---------	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-98	0-7	1-3	1.58-1.67	300.0-400.0	0.03-0.05	0.0-0.2	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-99	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
Scidmore--------	0-3	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	3-9	68-70	22-28	3-8	1.39-1.62	10.0-50.0	0.11-0.15	0.0-0.4	2.0-11
	9-31	82-85	10-15	3-5	1.53-1.70	100.0-200.0	0.04-0.07	0.0-0.3	0.1-2.5
	31-50	91-98	0-8	1-5	1.56-1.71	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	50-150	93-98	0-6	1-5	1.60-1.70	500.0-600.0	0.02-0.05	0.0-0.1	0.1-2.5
Perouse, frequently ponded---------	0-4	---	---	---	0.14-0.34	5.0-25.0	0.30-0.59	---	40-100
	4-9	---	---	---	0.14-0.34	5.0-25.0	0.30-0.60	---	40-100
	9-40	90-97	0-8	1-3	1.59-1.67	300.0-400.0	0.03-0.05	0.0-0.2	0.1-2.5
	40-60	95-98	0-4	1-3	1.58-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5
	60-150	95-100	0-3	0-2	1.60-1.69	300.0-400.0	0.03-0.05	0.0-0.1	0.1-2.5

Table 15.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink-swell potential	Organic matter
	Cm	Pct	Pct	Pct	g/cc	um/sec	Cm/cm	Pct	Pct
22HIA:									
Lithic Cryorthents, rugged summit--	0-3	---	---	---	0.22-0.29	100.0-700.0	0.10-0.30	---	60-95
	3-6	40-51	29-50	7-20	1.18-1.24	4.0-14.0	0.09-0.18	0.2-2.3	5.0-10
	6-36	45-70	14-50	0-20	1.47-1.64	4.0-42.0	0.04-0.12	0.0-1.7	1.0-3.0
	36-200	---	---	---	---	---	---	---	---
22SM1:									
Woodlake--------	0-9	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	9-37	62-75	19-36	2-7	1.34-1.59	10.0-50.0	0.01-0.06	0.0-0.1	2.0-10
	37-70	65-79	13-29	6-10	1.49-1.62	10.0-50.0	0.01-0.05	0.0-0.2	0.4-8.0
	70-200	---	---	---	---	0.0-0.1	---	---	---
Flapjack--------	0-4	---	---	---	0.18-0.27	100.0-700.0	0.20-0.40	---	40-100
	4-20	60-80	12-35	2-11	1.33-1.64	2.5-14.0	0.02-0.05	0.0-0.6	1.0-9.0
	20-64	65-80	11-29	2-10	1.42-1.66	2.5-14.0	0.03-0.06	0.0-0.9	1.0-9.0
	64-200	---	---	---	---	0.0-0.1	---	---	0.0-0.0

Table 16.—Erosion Properties

(Entries under “Erosion factors” apply to the entire profile. Entries under “Wind erodibility group” and “Wind erodibility index” apply only to the surface layer)

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
20AF1:						
Muirpoint	0-4	---	---	5	5	56
	4-11	.05	.15			
	11-30	.02	.05			
	30-150	.02	.02			
Puffin	0-70	.02	.15	5	6	48
	70-150	.02	.02			
20AF2:						
Entisols, alluvial fans, occasionally flooded	0-3	---	---	1	2	134
	3-6	.49	.49			
	6-26	.15	.15			
	26-152	.02	.02			
20CL1:						
Strawberry	0-3	---	---	5	3	86
	3-49	.32	.32			
	49-150	.37	.37			
Fingerock	0-18	.05	.05	5	1	250
	18-22	.10	.10			
	22-130	.20	.20			
	130-150	.15	.15			
20CP1:						
Oberlin	0-3	.17	.17	5	3	86
	3-18	.37	.37			
	18-35	.49	.49			
	35-58	.15	.15			
	58-150	.02	.02			
Perouse, frequently ponded	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			
Perouse	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			
20CP2:						
Beaches.						
Monashka	0-4	---	---	5	8	0
	4-8	---	---			
	8-19	.02	.02			
	19-150	.02	.02			
Murkbay	0-1	---	---	5	2	134
	1-3	.17	.17			
	3-25	.02	.02			
	25-80	.02	.02			
	80-125	.15	.15			
	125-150	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
		Kw	Kf	T		
20CPF:						
Icy	0-20	---	---	4	8	0
	20-89	.43	.43			
	89-119	.43	.43			
	119-150	.10	.10			
Excursion	0-14	---	---	5	8	0
	14-26	---	---			
	26-70	.28	.28			
	70-150	.43	.43			
20ED1:						
Gustavus	0-12	---	---	5	3	86
	12-33	.32	.32			
	33-68	.10	.10			
	68-140	.10	.10			
	140-150	.02	.02			
Bartlettcove	0-12	---	---	5	2	134
	12-14	.28	.28			
	14-30	.28	.28			
	30-45	.32	.32			
	45-150	.02	.02			
20ED2:						
Beardslee	0-13	---	---	5	3	86
	13-21	.15	.15			
	21-48	.15	.15			
	48-150	.02	.02			
Monashka	0-4	---	---	5	8	0
	4-8	---	---			
	8-19	.02	.02			
	19-150	.02	.02			
20FP1:						
Drybay	0-2	---	---	1	2	134
	2-11	.28	.28			
	11-24	.05	.24			
	24-60	.02	.02			
	60-150	.02	.02			
Tidalwave	0-4	---	---	2	3	86
	4-16	.43	.43			
	16-24	.37	.37			
	24-49	.37	.37			
	49-150	.02	.02			
20FP2:						
Bertha	0-3	---	---	1	1	180
	3-13	.02	.02			
	13-22	.02	.02			
	22-150	.02	.02			
Puffin	0-70	.02	.15	5	6	48
	70-150	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
		Kw	Kf	T		
20FP3:						
Tidalwave	0-4	---	---	2	3	86
	4-16	.43	.43			
	16-24	.37	.37			
	24-49	.37	.37			
	49-150	.02	.02			
Ashmun, frequently ponded	0-1	---	---	5	8	0
	1-15	.02	.02			
	15-150	.02	.02			
Drybay	0-2	---	---	1	2	134
	2-11	.28	.28			
	11-24	.05	.24			
	24-60	.02	.02			
	60-150	.02	.02			
20FPL:						
Cryaquepts	0-10	---	---	2	6	48
	10-15	.15	.32			
	15-28	.17	.37			
	28-152	.10	.24			
Typic Cryaquents, gravelly, very poorly drained	0-4	---	---	5	8	0
	4-8	---	---			
	8-16	.10	.20			
	16-38	.02	.02			
	38-152	.02	.02			
Water.						
20FPM:						
Typic Cryaquents, silty	0-3	---	---	5	7	38
	3-7	---	---			
	7-9	.43	.43			
	9-19	.55	.55			
	19-29	.64	.64			
	29-152	.64	.64			
20FPY:						
Oxyaquic Cryorthents, sandy or gravelly	0-8	---	---	5	1	220
	8-15	.02	.05			
	15-38	.02	.02			
	38-152	.02	.02			
Typic Cryaquents, sandy or gravelly	0-5	---	---	5	3	86
	5-13	.37	.37			
	13-43	.28	.28			
	43-75	.32	.32			
	75-152	.64	.64			
20FPZ:						
Typic Cryorthents, gravelly	0-3	---	---	5	5	56
	3-8	.10	.24			
	8-20	.02	.10			
	20-30	.02	.02			
	30-152	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
20FPZ:						
Typic Cryofluvents	0-10	---	---	2	3	86
	10-13	.24	.24			
	13-18	.15	.15			
	18-23	.24	.24			
	23-31	.17	.17			
	31-36	.02	.02			
	36-49	.17	.17			
	49-152	.02	.02			
20GP1:						
Gustavus	0-12	---	---	5	3	86
	12-33	.32	.32			
	33-68	.10	.10			
	68-140	.10	.10			
	140-150	.02	.02			
Ibach	0-9	---	---	1	3	86
	9-27	.20	.43			
	27-56	.02	.28			
	56-73	.05	.28			
	73-150	.05	.24			
Scidmore	0-3	---	---	5	3	86
	3-9	.15	.15			
	9-31	.10	.10			
	31-50	.05	.05			
	50-150	.02	.02			
20HI1:						
Foad	0-5	---	---	2	7	38
	5-10	---	---			
	10-15	.15	.37			
	15-84	.15	.43			
	84-200	---	---			
Boussole	0-10	---	---	2	2	134
	10-28	---	---			
	28-41	.43	.43			
	41-51	.24	.43			
	51-200	---	---			
20HI2:						
Kashoto	0-18	---	---	1	7	38
	18-56	---	---			
	56-150	---	---			
Foad	0-5	---	---	2	7	38
	5-10	---	---			
	10-15	.15	.37			
	15-84	.15	.43			
	84-200	---	---			
Kutskloh	0-9	---	---	1	6	48
	9-21	---	---			
	21-30	.24	.37			
	30-150	.05	.37			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
		Kw	Kf	T		
20HI3:						
Polkapenn	0-10	---	---	1	8	0
	10-22	.05	.20			
	22-42	.10	.28			
	42-200	---	---			
Dagelet	0-3	---	---	2	5	56
	3-8	.10	.15			
	8-37	.10	.24			
	37-60	.10	.32			
	60-200	---	---			
Nunatak	0-3	---	---	3	5	56
	3-10	.05	.15			
	10-36	.05	.20			
	36-113	.05	.20			
	113-200	---	---			
20HI5:						
Kaknau	0-4	---	---	2	3	86
	4-12	.43	.43			
	12-40	.28	.55			
	40-87	.49	.49			
	87-200	---	---			
Tricklake	0-4	---	---	5	2	134
	4-22	.37	.37			
	22-56	.43	.43			
	56-150	.43	.43			
20HIB:						
Drybay	0-2	---	---	1	2	134
	2-11	.28	.28			
	11-24	.05	.24			
	24-60	.02	.02			
	60-150	.02	.02			
Kaknau	0-4	---	---	2	3	86
	4-12	.43	.43			
	12-40	.28	.55			
	40-87	.49	.49			
	87-200	---	---			
Vivid	0-8	---	---	1	4L	86
	8-28	.64	.64			
	28-150	.05	.17			
20HID:						
Grandplateau	0-2	---	---	3	2	134
	2-18	.43	.43			
	18-27	.43	.43			
	27-43	.43	.43			
	43-120	.43	.43			
	120-130	.10	.49			
	130-200	---	---			
Crillon	0-10	.43	.43	2	2	134
	10-20	.37	.37			
	20-60	.64	.64			
	60-80	---	---			
	80-200	---	---			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
		Kw	Kf	T		
20HIE:						
Kashoto	0-18	---	---	1	7	38
	18-56	---	---			
	56-150	---	---			
Kutskloh	0-9	---	---	1	6	48
	9-21	---	---			
	21-30	.24	.37			
	30-150	.05	.37			
Wachusett	0-23	---	---	2	5	56
	23-34	---	---			
	34-41	.43	.43			
	41-60	.28	.43			
	60-80	.20	.37			
	80-85	.24	.43			
	85-200	---	---			
20HIF:						
Kashoto	0-18	---	---	1	7	38
	18-56	---	---			
	56-150	---	---			
Wachusett	0-23	---	---	2	5	56
	23-34	---	---			
	34-41	.43	.43			
	41-60	.28	.43			
	60-80	.20	.37			
	80-85	.24	.43			
	85-200	---	---			
20HIN:						
Polkapenn	0-10	---	---	1	8	0
	10-22	.05	.20			
	22-42	.10	.28			
	42-200	---	---			
Nunatak	0-3	---	---	3	5	56
	3-10	.05	.15			
	10-36	.05	.20			
	36-113	.05	.20			
	113-200	---	---			
20HIS:						
Lithic Cryorthents, rugged summit	0-3	---	---	1	6	48
	3-6	.15	.32			
	6-36	.17	.43			
	36-200	---	---			
Typic Humicryepts, high elevation	0-10	---	---	5	6	48
	10-28	.10	.24			
	28-35	.15	.37			
	35-51	.05	.15			
	51-152	.15	.32			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
20IS1:						
Cenotaph-------------------	0-17	---	---	5	5	56
	17-25	.10	.20			
	25-100	.15	.28			
	100-150	.28	.37			
Water, saline.						
Beaches.						
20LF1:						
Abyss----------------------	0-13	.37	.37	2	5	56
	13-30	.15	.15			
	30-150	.15	.15			
Astrolable-----------------	0-25	.15	.15	1	8	0
	25-150	.02	.02			
20MD1:						
Gustavus-------------------	0-12	---	---	5	3	86
	12-33	.32	.32			
	33-68	.10	.10			
	68-140	.10	.10			
	140-150	.02	.02			
Perouse--------------------	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			
20MF1:						
Geikie---------------------	0-7	.43	.43	2	5	56
	7-32	.43	.43			
	32-48	.49	.49			
	48-120	.05	.05			
	120-150	.02	.02			
Gustavus-------------------	0-12	---	---	5	3	86
	12-33	.32	.32			
	33-68	.10	.10			
	68-140	.10	.10			
	140-150	.02	.02			
Scidmore-------------------	0-3	---	---	5	3	86
	3-9	.15	.15			
	9-31	.10	.10			
	31-50	.05	.05			
	50-150	.02	.02			
20MF2:						
Gustavus-------------------	0-12	---	---	5	3	86
	12-33	.32	.32			
	33-68	.10	.10			
	68-140	.10	.10			
	140-150	.02	.02			
Geikie---------------------	0-7	.43	.43	2	5	56
	7-32	.43	.43			
	32-48	.49	.49			
	48-120	.05	.05			
	120-150	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
		Kw	Kf	T		
20MT1:						
Bearisland	0-2	---	---	5	3	86
	2-24	.02	.05			
	24-150	.02	.10			
Kadachan	0-11	.05	.05	5	1	250
	11-18	.02	.05			
	18-150	.02	.05			
Rubble land.						
20MT2:						
Escures	0-4	---	---	2	5	56
	4-10	.10	.20			
	10-25	.15	.32			
	25-54	.10	.32			
	54-200	---	---			
Polkapenn	0-10	---	---	1	8	0
	10-22	.05	.20			
	22-42	.10	.28			
	42-200	---	---			
Nunatak	0-3	---	---	3	5	56
	3-10	.05	.15			
	10-36	.05	.20			
	36-113	.05	.20			
	113-200	---	---			
20MT3:						
Polkapenn	0-10	---	---	1	8	0
	10-22	.05	.20			
	22-42	.10	.28			
	42-200	---	---			
Bearisland	0-2	---	---	5	3	86
	2-24	.02	.05			
	24-150	.02	.10			
Enigma	0-10	.05	.15	2	6	48
	10-62	.02	.17			
	62-200	---	---			
20MT4:						
Seclusion	0-9	---	---	1	6	48
	9-15	.10	.28			
	15-40	.10	.24			
	40-200	---	---			
Rock outcrop.						
20MT5:						
Rock outcrop.						
Seclusion	0-9	---	---	1	6	48
	9-15	.10	.28			
	15-40	.10	.24			
	40-200	---	---			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors: Kw	Erosion factors: Kf	Erosion factors: T	Wind erodibility group	Wind erodibility index
20MT5:						
Skarn	0-8	---	---	3	5	56
	8-14	.05	.10			
	14-60	.05	.17			
	60-104	.10	.24			
	104-200	---	---			
20MT6:						
Bergbay	0-8	---	---	1	5	56
	8-37	.10	.15			
	37-70	.10	.37			
	70-200	---	---			
Boussole	0-10	---	---	2	2	134
	10-28	---	---			
	28-41	.43	.43			
	41-51	.24	.43			
	51-200	---	---			
Toyatte	0-16	---	---	1	8	0
	16-32	---	---			
	32-42	.64	.64			
	42-200	---	---			
20MT7:						
Foad	0-5	---	---	2	7	38
	5-10	---	---			
	10-15	.15	.37			
	15-84	.15	.43			
	84-200	---	---			
Abdallah	0-3	---	---	5	8	0
	3-20	.05	.20			
	20-150	.02	.24			
Justicecreek	0-11	---	---	1	8	0
	11-22	---	---			
	22-200	---	---			
20MTC:						
Skarn	0-8	---	---	3	5	56
	8-14	.05	.10			
	14-60	.05	.17			
	60-104	.10	.24			
	104-200	---	---			
Polkapenn	0-10	---	---	1	8	0
	10-22	.05	.20			
	22-42	.10	.28			
	42-200	---	---			
Kadachan	0-11	.05	.05	5	1	250
	11-18	.02	.05			
	18-150	.02	.05			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
20MTE:						
Wachusett	0-23	---	---	2	5	56
	23-34	---	---			
	34-41	.43	.43			
	41-60	.28	.43			
	60-80	.20	.37			
	80-85	.24	.43			
	85-200	---	---			
Maquinna	0-10	---	---	3	6	48
	10-33	---	---			
	33-75	.20	.43			
	75-107	.20	.55			
	107-200	---	---			
Boussole	0-10	---	---	2	2	134
	10-28	---	---			
	28-41	.43	.43			
	41-51	.24	.43			
	51-200	---	---			
20MTF:						
Wachusett	0-23	---	---	2	5	56
	23-34	---	---			
	34-41	.43	.43			
	41-60	.28	.43			
	60-80	.20	.37			
	80-85	.24	.43			
	85-200	---	---			
Maquinna	0-10	---	---	3	6	48
	10-33	---	---			
	33-75	.20	.43			
	75-107	.20	.55			
	107-200	---	---			
Enigma	0-10	.05	.15	2	6	48
	10-62	.02	.17			
	62-200	---	---			
20OC1:						
Scidmore	0-3	---	---	5	3	86
	3-9	.15	.15			
	9-31	.10	.10			
	31-50	.05	.05			
	50-150	.02	.02			
Perouse, frequently ponded	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			
20OD1:						
Gustavus	0-12	---	---	5	3	86
	12-33	.32	.32			
	33-68	.10	.10			
	68-140	.10	.10			
	140-150	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
200D1:						
Lamplugh	0-15	---	---	5	3	86
	15-19	---	---			
	19-21	.28	.28			
	21-35	.28	.28			
	35-54	.32	.32			
	54-70	.55	.55			
	70-150	.37	.37			
200DF:						
Glacierbay	0-8	.37	.37	5	8	0
	8-25	.55	.55			
	25-58	.49	.49			
	58-100	.10	.10			
	100-130	.05	.05			
	130-150	.02	.02			
Geikie	0-7	.43	.43	2	5	56
	7-32	.43	.43			
	32-48	.49	.49			
	48-120	.05	.05			
	120-150	.02	.02			
200P1:						
Fossil	0-10	---	---	1	1	160
	10-27	.02	.02			
	27-50	.02	.02			
	50-95	.05	.05			
	95-150	.02	.02			
Tyeen	0-4	---	---	5	6	48
	4-12	.05	.15			
	12-50	.05	.20			
	50-150	.10	.20			
Vivid	0-8	---	---	1	4L	86
	8-28	.64	.64			
	28-150	.05	.17			
200P4:						
Kashoto	0-18	---	---	1	7	38
	18-56	---	---			
	56-150	---	---			
Annoksek	0-3	---	---	1	3	86
	3-12	---	---			
	12-30	.32	.32			
	30-200	---	---			
Bulky	0-5	---	---	5	3	86
	5-25	.32	.32			
	25-50	.43	.43			
	50-150	.10	.10			
200P5:						
Fossil	0-10	---	---	1	1	160
	10-27	.02	.02			
	27-50	.02	.02			
	50-95	.05	.05			
	95-150	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
20OP5:						
Tyeen	0-4	---	---	5	6	48
	4-12	.05	.15			
	12-50	.05	.20			
	50-150	.10	.20			
Vivid	0-8	---	---	1	4L	86
	8-28	.64	.64			
	28-150	.05	.17			
20OP6:						
Bulky	0-5	---	---	5	3	86
	5-25	.32	.32			
	25-50	.43	.43			
	50-150	.10	.10			
Bertha	0-3	---	---	1	1	180
	3-13	.02	.02			
	13-22	.02	.02			
	22-150	.02	.02			
Icy	0-20	---	---	4	8	0
	20-89	.43	.43			
	89-119	.43	.43			
	119-150	.10	.10			
20OPE:						
Tyeen	0-4	---	---	5	6	48
	4-12	.05	.15			
	12-50	.05	.20			
	50-150	.10	.20			
Shagcove	0-3	---	---	5	5	56
	3-7	.10	.24			
	7-49	.05	.15			
	49-60	.05	.15			
	60-150	.10	.32			
Puffin	0-70	.02	.15	5	6	48
	70-150	.02	.02			
20OV1:						
Perouse, frequently ponded	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			
Perouse	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			
20OW1:						
Perouse	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
20OW1:						
Gustavus	0-12	---	---	5	3	86
	12-33	.32	.32			
	33-68	.10	.10			
	68-140	.10	.10			
	140-150	.02	.02			
Perouse, frequently ponded	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			
20OWF:						
Fairweather	0-2	---	---	2	8	0
	2-5	.37	.37			
	5-38	.49	.49			
	38-150	.02	.02			
Icy	0-20	---	---	4	8	0
	20-89	.43	.43			
	89-119	.43	.43			
	119-150	.10	.10			
20PL1:						
Tyeen	0-4	---	---	5	6	48
	4-12	.05	.15			
	12-50	.05	.20			
	50-150	.10	.20			
Cenotaph	0-17	---	---	5	5	56
	17-25	.10	.20			
	25-100	.15	.28			
	100-150	.28	.37			
Fossil	0-10	---	---	1	1	160
	10-27	.02	.02			
	27-50	.02	.02			
	50-95	.05	.05			
	95-150	.02	.02			
20PL2:						
Tyeen	0-4	---	---	5	6	48
	4-12	.05	.15			
	12-50	.05	.20			
	50-150	.10	.20			
Fossil	0-10	---	---	1	1	160
	10-27	.02	.02			
	27-50	.02	.02			
	50-95	.05	.05			
	95-150	.02	.02			
Fingers	0-2	---	---	5	3	86
	2-8	.05	.15			
	8-43	.02	.02			
	43-150	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
20PL3:						
Kashoto	0-18	---	---	1	7	38
	18-56	---	---			
	56-150	---	---			
Annoksek	0-3	---	---	1	3	86
	3-12	---	---			
	12-30	.32	.32			
	30-200	---	---			
Ancon	0-8	---	---	3	3	86
	8-21	.24	.24			
	21-24	.24	.24			
	24-53	.32	.32			
	53-103	.17	.17			
	103-200	---	---			
20PL6:						
Tidalwave	0-4	---	---	2	3	86
	4-16	.43	.43			
	16-24	.37	.37			
	24-49	.37	.37			
	49-150	.02	.02			
Drybay	0-2	---	---	1	2	134
	2-11	.28	.28			
	11-24	.05	.24			
	24-60	.02	.02			
	60-150	.02	.02			
Puffin	0-70	.02	.15	5	6	48
	70-150	.02	.02			
20PLD:						
Typic Cryaquents, sandy	0-7	---	---	2	8	0
	7-15	.32	.32			
	15-32	.02	.02			
	32-51	.02	.02			
	51-72	.02	.02			
	72-152	.02	.02			
Typic Cryorthents, sandy, rarely flooded	0-8	---	---	5	1	220
	8-20	.10	.10			
	20-46	.05	.05			
	46-49	.64	.64			
	49-152	.02	.02			
20RW2:						
Riverwash.						
Oxyaquic Cryorthents, sandy or gravelly	0-8	---	---	5	1	220
	8-15	.02	.05			
	15-38	.02	.02			
	38-152	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodibility group	Wind erodibility index
		Kw	Kf	T		
20SC:						
Beaches.						
Typic Cryopsamments, rarely flooded	0-5	---	---	5	1	220
	5-23	.05	.05			
	23-152	.02	.02			
20TE2:						
Tidalwave	0-4	---	---	2	3	86
	4-16	.43	.43			
	16-24	.37	.37			
	24-49	.37	.37			
	49-150	.02	.02			
Drybay	0-2	---	---	1	2	134
	2-11	.28	.28			
	11-24	.05	.24			
	24-60	.02	.02			
	60-150	.02	.02			
20TF1:						
Water, saline.						
Astrolable	0-25	.15	.15	1	8	0
	25-150	.02	.02			
Murkbay	0-1	---	---	5	2	134
	1-3	.17	.17			
	3-25	.02	.02			
	25-80	.02	.02			
	80-125	.15	.15			
	125-150	.02	.02			
20TF3:						
Water, saline.						
Astrolable	0-25	.15	.15	1	8	0
	25-150	.02	.02			
Beartrack	0-2	---	---	5	5	56
	2-21	.55	.55			
	21-40	.49	.49			
	40-150	.49	.49			
20TH1:						
Ibach	0-9	---	---	1	3	86
	9-27	.20	.43			
	27-56	.02	.28			
	56-73	.05	.28			
	73-150	.05	.24			
Lamplugh	0-15	---	---	5	3	86
	15-19	---	---			
	19-21	.28	.28			
	21-35	.28	.28			
	35-54	.32	.32			
	54-70	.55	.55			
	70-150	.37	.37			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
20TH1:						
Bartlettcove	0-12	---	---	5	2	134
	12-14	.28	.28			
	14-30	.28	.28			
	30-45	.32	.32			
	45-150	.02	.02			
20UL1:						
Urban land.						
20UM1:						
Rock outcrop.						
Bearisland	0-2	---	---	5	3	86
	2-24	.02	.05			
	24-150	.02	.10			
20UM2:						
Rock outcrop.						
Bearisland	0-2	---	---	5	3	86
	2-24	.02	.05			
	24-150	.02	.10			
20VBA:						
Typic Cryofluvents	0-10	---	---	2	3	86
	10-13	.24	.24			
	13-18	.15	.15			
	18-23	.24	.24			
	23-31	.17	.17			
	31-36	.02	.02			
	36-49	.17	.17			
	49-152	.02	.02			
Aquic Dystrocryepts, silty	0-2	---	---	5	3	86
	2-3	---	---			
	3-18	.32	.32			
	18-34	.32	.32			
	34-50	.43	.43			
	50-67	.55	.55			
	67-152	.64	.64			
20WD1:						
Perouse	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			
Scidmore	0-3	---	---	5	3	86
	3-9	.15	.15			
	9-31	.10	.10			
	31-50	.05	.05			
	50-150	.02	.02			
Perouse, frequently ponded	0-4	---	---	5	8	0
	4-9	---	---			
	9-40	.02	.02			
	40-60	.02	.02			
	60-150	.02	.02			

Table 16.—Erosion Properties—Continued

Map symbol and soil name	Depth (cm)	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
		Kw	Kf	T		
22HIA:						
Rock outcrop, rugged summit.						
Lithic Cryorthents, rugged summit	0-3	---	---	1	6	48
	3-6	.15	.32			
	6-36	.17	.43			
	36-200	---	---			
22SM1:						
Woodlake	0-9	---	---	2	8	0
	9-37	.02	.17			
	37-70	.05	.37			
	70-200	---	---			
Flapjack	0-4	---	---	2	8	0
	4-20	.02	.10			
	20-64	.05	.24			
	64-200	---	---			
BR. Rock outcrop						
GL2. Glaciers						
P. Pits						
RW. Riverwash						
SW. Water, saline						
W. Water						

Table 17.—Total Soil Carbon

(This table displays soil organic carbon (SOC) and soil inorganic carbon (SIC) in kilograms per square meter to a depth of 2 meters or to the representative top depth of any kind of bedrock or any cemented soil horizon. SOC and SIC are reported on a volumetric whole soil basis, corrected for representative rock fragments indicated in the database. SOC is converted from horizon soil organic matter of the fraction of the soil less than 2mm in diameter. If soil organic matter indicated in the database is NULL, SOC is assumed to be zero. SIC is converted from horizon calcium carbonate content fraction of the soil less than 2mm in diameter. If horizon calcium carbonate indicated in the database is NULL, SIC is assumed to be zero. A weighted average of all horizons is used in the calculations. Only major components of a map unit are displayed in this table)

Map unit symbol, component name, and component percent	SOC	SIC
	kg/m^2	kg/m^2
20AF1:		
Muirpoint (65%)	9	0
Puffin (15%)	3	1
20AF2:		
Entisols, alluvial fans, occasionally flooded (90%)	10	0
20CL1:		
Strawberry (60%)	27	2
Fingerock (20%)	12	8
20CP1:		
Oberlin (55%)	16	3
Perouse, frequently ponded (25%)	20	7
Perouse (15%)	20	7
20CP2:		
Beaches (50%).		
Monashka (25%)	20	0
Murkbay (25%)	14	3
20CPF:		
Icy (45%)	38	1
Excursion (40%)	46	1
20ED1:		
Gustavus (75%)	20	0
Bartlettcove (20%)	22	0
20ED2:		
Beardslee (60%)	27	0
Monashka (40%)	20	0

Table 17.—Total Soil Carbon—Continued

Map unit symbol, component name, and component percent	SOC	SIC
	kg/m^2	kg/m^2
20FP1:		
Drybay (70%)	9	1
Tidalwave (30%)	22	0
20FP2:		
Bertha (55%)	14	0
Puffin (30%)	3	1
20FP3:		
Tidalwave (60%)	22	0
Ashmun, frequently ponded (25%)	11	0
Drybay (15%)	9	1
20FPL:		
Cryaquepts (40%)	30	0
Typic Cryaquents, gravelly, very poorly drained (30%)	12	0
Water (30%).		
20FPM:		
Typic Cryaquents, silty (85%)	19	0
20FPY:		
Oxyaquic Cryorthents, sandy or gravelly (60%)	20	0
Typic Cryaquents, sandy or gravelly (25%)	20	0
20FPZ:		
Typic Cryorthents, gravelly (60%)	8	0
Typic Cryofluvents (30%)	32	0
20GP1:		
Gustavus (35%)	20	0
Ibach (35%)	12	0
Scidmore (25%)	16	7
20HI1:		
Foad (65%)	29	0
Boussole (20%)	35	0
20HI2:		
Kashoto (35%)	144	0
Foad (25%)	29	0
Kutskloh (20%)	34	0

Table 17.—Total Soil Carbon—Continued

Map unit symbol, component name, and component percent	SOC	SIC
	kg/m^2	kg/m^2
20HI3:		
Polkapenn (35%)	16	0
Dagelet (25%)	10	0
Nunatak (20%)	11	0
20HI5:		
Kaknau (45%)	17	0
Tricklake (35%)	34	0
20HIB:		
Drybay (35%)	9	1
Kaknau (30%)	17	0
Vivid (25%)	24	5
20HID:		
Grandplateau (55%)	39	0
Crillon (35%)	11	0
20HIE:		
Kashoto (40%)	144	0
Kutskloh (30%)	34	0
Wachusett (20%)	43	0
20HIF:		
Kashoto (45%)	144	0
Wachusett (35%)	40	0
20HIN:		
Polkapenn (40%)	12	0
Nunatak (30%)	11	0
20HIS:		
Lithic Cryorthents, rugged summit (46%)	8	0
Typic Humicryepts, high elevation (44%)	28	0
20IS1:		
Cenotaph (35%)	30	6
Water, saline (35%).		
Beaches (20%).		
20LF1:		
Abyss (55%)	28	0
Astrolable (30%)	6	0
20MD1:		
Gustavus (70%)	20	0
Perouse (20%)	20	7

Table 17.—Total Soil Carbon—Continued

Map unit symbol, component name, and component percent	SOC	SIC
	kg/m^2	kg/m^2
20MF1:		
Geikie (55%)	13	5
Gustavus (30%)	20	0
Scidmore (15%)	16	7
20MF2:		
Gustavus (60%)	20	0
Geikie (30%)	13	5
20MT1:		
Bearisland (35%)	6	2
Kadachan (30%)	3	0
Rubble land (25%).		
20MT2:		
Escures (25%)	9	0
Polkapenn (25%)	16	0
Nunatak (20%)	11	0
20MT3:		
Polkapenn (30%)	16	0
Bearisland (25%)	6	2
Enigma (20%)	5	1
20MT4:		
Seclusion (65%)	7	1
Rock outcrop (25%).		
20MT5:		
Rock outcrop (35%).		
Seclusion (25%)	8	1
Skarn (20%)	26	1
20MT6:		
Bergbay (30%)	19	0
Boussole (25%)	35	0
Toyatte (20%)	31	0
20MT7:		
Foad (35%)	29	0
Abdallah (25%)	7	0
Justicecreek (20%)	21	0

Table 17.—Total Soil Carbon—Continued

Map unit symbol, component name, and component percent	SOC	SIC
	kg/m^2	kg/m^2
20MTC:		
Skarn (35%)	26	1
Polkapenn (25%)	16	0
Kadachan (20%)	3	0
20MTE:		
Wachusett (40%)	43	0
Maquinna (30%)	36	0
Boussole (20%)	35	0
20MTF:		
Wachusett (35%)	43	0
Maquinna (25%)	36	0
Enigma (20%)	5	1
20OC1:		
Scidmore (55%)	16	7
Perouse, frequently ponded (35%)	20	7
20OD1:		
Gustavus (45%)	20	0
Lamplugh (45%)	37	0
20ODF:		
Glacierbay (50%)	15	6
Geikie (30%)	13	5
20OP1:		
Fossil (30%)	9	4
Tyeen (25%)	18	2
Vivid (20%)	21	5
20OP4:		
Kashoto (50%)	144	0
Annoksek (30%)	13	0
Bulky (15%)	21	0
20OP5:		
Fossil (35%)	12	4
Tyeen (25%)	18	2
Vivid (20%)	24	5

Table 17.—Total Soil Carbon—Continued

Map unit symbol, component name, and component percent	SOC	SIC
	kg/m^2	kg/m^2
20OP6:		
Bulky (35%)	21	0
Bertha (30%)	14	0
Icy (15%)	38	1
20OPE:		
Tyeen (40%)	18	2
Shagcove (30%)	9	1
Puffin (20%)	3	1
20OV1:		
Perouse, frequently ponded (60%)	20	7
Perouse (40%)	20	7
20OW1:		
Perouse (40%)	20	7
Gustavus (30%)	20	0
Perouse, frequently ponded (20%)	20	7
20OWF:		
Fairweather (70%)	18	5
Icy (30%)	38	1
20PL1:		
Tyeen (40%)	18	2
Cenotaph (25%)	30	6
Fossil (20%)	12	4
20PL2:		
Tyeen (35%)	18	2
Fossil (30%)	12	4
Fingers (15%)	5	2
20PL3:		
Kashoto (35%)	144	0
Annoksek (25%)	13	0
Ancon (20%)	26	0
20PL6:		
Tidalwave (60%)	21	0
Drybay (25%)	9	1
Puffin (15%)	3	1

Table 17.—Total Soil Carbon—Continued

Map unit symbol, component name, and component percent	SOC	SIC
	kg/m^2	kg/m^2
20PLD:		
Typic Cryaquents, sandy (55%)	22	0
Typic Cryorthents, sandy, rarely flooded (30%)	23	0
20RW2:		
Riverwash (60%).		
Oxyaquic Cryorthents, sandy or gravelly (25%)	20	0
20SC:		
Beaches (60%).		
Typic Cryopsamments, rarely flooded (30%)	16	3
20TE2:		
Tidalwave (50%)	22	0
Drybay (30%)	9	1
20TF1:		
Water, saline (70%).		
Astrolable (15%)	6	0
Murkbay (15%)	14	3
20TF3:		
Water, saline (55%).		
Astrolable (20%)	6	0
Beartrack (15%)	26	7
20TH1:		
Ibach (40%)	12	0
Lamplugh (30%)	37	0
Bartlettcove (20%)	22	0
20UL1.		
Urban land (90%)		
20UM1:		
Rock outcrop (60%).		
Bearisland (25%)	6	2
20UM2:		
Rock outcrop (60%).		
Bearisland (25%)	6	2
20VBA:		
Typic Cryofluvents (50%)	32	0
Aquic Dystrocryepts, silty (30%)	27	0

Table 17.—Total Soil Carbon—Continued

Map unit symbol, component name, and component percent	SOC	SIC
	kg/m^2	kg/m^2
20WD1:		
Perouse (35%)	20	7
Scidmore (35%)	16	7
Perouse, frequently ponded (20%)	20	7
22HIA:		
Rock outcrop, rugged summit (80%).		
Lithic Cryorthents, rugged summit (15%)	8	0
22SM1:		
Woodlake (60%)	14	0
Flapjack (30%)	13	0
BR.		
Rock outcrop (100%)		
GL2.		
Glaciers (95%)		
P.		
Pits (90%)		
RW.		
Riverwash (90%)		
SW.		
Water, saline (95%)		
W.		
Water (100%)		

Table 18.—Chemical Soil Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20AF1:						
Muirpoint	0-4	62.8-133.4	---	6.2-6.3	0	0
	4-11	4.2-7.9	---	6.7-7.4	0	0
	11-30	3.6-8.2	---	6.7-7.8	0	0
	30-150	1.1-4.5	---	7.3-7.8	0	0
Puffin	0-70	0.1-6.1	---	5.6-7.9	0-1	0
	70-150	0.1-4.6	---	7.2-8.1	0-1	0
20AF2:						
Entisols, alluvial fans, occasionally flooded	0-3	---	14.2-28.9	4.5-5.5	0	0
	3-6	0.1-4.8	---	4.5-6.5	0	0
	6-26	0.1-4.5	---	6.0-7.3	0	0
	26-152	0.1-4.2	---	6.6-7.3	0	0
20CL1:						
Strawberry	0-3	85.0-135.0	27.2-82.0	4.5-7.0	0	0
	3-49	2.0-6.8	---	6.6-8.1	0-3	0.0-2.0
	49-150	2.0-7.0	---	6.8-8.2	0-2	0.0-2.0
Fingerock	0-18	0.9-2.9	---	7.9-8.0	1-3	0
	18-22	0.9-2.9	---	7.9-8.4	1-5	0
	22-130	0.9-2.9	---	7.9-8.4	1-5	1.3-3.5
	130-150	0.9-2.9	---	7.9-8.4	1-5	1.3-3.5
20CP1:						
Oberlin	0-3	3.1-9.3	---	5.9-6.9	0	0.0-2.0
	3-18	2.6-8.6	---	6.1-7.8	0	0.0-2.5
	18-35	4.5-9.0	---	7.0-8.5	0-3	0.0-3.7
	35-58	1.5-4.8	---	7.3-8.5	0-5	1.0-3.7
	58-150	1.5-4.0	---	7.3-8.5	0-3	1.0-3.7
Perouse, frequently ponded	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0
Perouse	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0
20CP2:						
Monashka	0-4	61.6-135.8	---	5.9-6.1	0	0
	4-8	87.6-171.5	---	5.9-6.1	0	0
	8-19	0.1-2.1	---	6.6-7.2	0	0
	19-150	0.1-2.1	---	6.6-7.2	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20CP2:						
Murkbay	0-1	124.0-212.0	---	7.0-7.3	0	0
	1-3	0.9-2.9	---	7.3-7.8	0	0
	3-25	0.1-2.9	---	8.0-8.2	1-3	0
	25-80	0.1-2.9	---	8.0-8.2	1-3	0
	80-125	0.1-2.9	---	7.1-8.2	0-5	0
	125-150	0.1-2.9	---	7.0-8.5	1-5	0.3-2.0
20CPF:						
Icy	0-20	62.9-137.2	---	6.5-6.9	0	0
	20-89	14.6-23.6	---	6.8-7.6	0	0
	89-119	14.6-23.6	---	7.0-8.0	0-1	0
	119-150	0.1-4.9	---	7.1-8.0	0-1	0
Excursion	0-14	65.2-103.4	---	6.0-6.3	0	0
	14-26	62.6-136.8	---	6.0-7.2	0	0
	26-70	10.1-13.9	---	6.7-7.8	0	0
	70-150	5.4-8.8	---	6.4-8.5	0-3	0
20ED1:						
Gustavus	0-12	65.0-130.0	13.9-62.0	3.1-5.5	0	0
	12-33	1.5-4.8	---	4.5-6.5	0	0
	33-68	1.5-4.8	---	5.5-6.5	0	0
	68-140	1.5-4.8	---	6.1-7.1	0	0
	140-150	0.9-3.2	---	7.0-7.5	0	0
Bartlettcove	0-12	55.0-130.0	16.7-55.2	4.7-4.8	0	0
	12-14	0.5-7.0	0.3-2.9	5.1-5.4	0	0
	14-30	0.9-2.5	---	5.4-6.4	0	0
	30-45	0.9-2.5	---	7.5-7.6	0	0
	45-150	0.9-2.5	---	6.3-7.7	0	0
20ED2:						
Beardslee	0-13	60.0-130.0	19.5-58.0	4.9-6.5	0	0
	13-21	1.1-9.4	---	5.7-6.3	0	0
	21-48	0.9-4.6	---	5.9-6.5	0	0
	48-150	0.1-4.6	---	6.3-6.5	0	0
Monashka	0-4	61.6-135.8	---	5.9-6.1	0	0
	4-8	87.6-171.5	---	5.9-6.1	0	0
	8-19	0.1-2.1	---	6.6-7.2	0	0
	19-150	0.1-2.1	---	6.6-7.2	0	0
20FP1:						
Drybay	0-2	64.5-135.0	---	6.6-6.8	0	0
	2-11	2.9-9.4	---	5.6-7.5	0	0
	11-24	2.5-9.2	---	5.2-6.9	0	0
	24-60	0.1-2.1	---	7.9-8.1	1-2	0
	60-150	0.1-2.1	---	7.6-8.3	0-2	0
Tidalwave	0-4	90.0-174.0	---	5.5-6.2	0	0
	4-16	2.9-5.1	---	6.0-6.5	0	0
	16-24	2.6-4.9	---	6.0-6.5	0	0
	24-49	2.5-4.7	---	6.0-6.5	0	0
	49-150	0.1-1.1	---	6.0-6.8	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20FP2:						
Bertha	0-3	61.8-103.0	---	6.0-6.8	0	0
	3-13	0.1-1.1	---	6.0-7.0	0	0
	13-22	0.1-1.1	---	6.0-7.0	0	0
	22-150	0.1-1.1	---	6.0-7.0	0	0
Puffin	0-70	0.1-6.1	---	5.6-7.9	0-1	0
	70-150	0.1-4.6	---	7.2-8.1	0-1	0
20FP3:						
Tidalwave	0-4	90.0-174.0	---	5.5-6.2	0	0
	4-16	2.9-5.1	---	6.0-6.5	0	0
	16-24	2.6-4.9	---	6.0-6.5	0	0
	24-49	2.5-4.7	---	6.0-6.5	0	0
	49-150	0.1-1.1	---	6.0-6.8	0	0
Ashmun, frequently ponded	0-1	73.8-224.3	---	7.3-7.8	0	0
	1-15	0.1-0.2	---	6.6-7.7	0	0
	15-150	0.1-0.2	---	7.1-7.6	0	0
Drybay	0-2	64.5-135.0	---	6.6-6.8	0	0
	2-11	2.9-9.4	---	5.6-7.5	0	0
	11-24	2.5-9.2	---	5.2-6.9	0	0
	24-60	0.1-2.1	---	7.9-8.1	1-2	0
	60-150	0.1-2.1	---	7.6-8.3	0-2	0
20FPL:						
Cryaquepts	0-10	---	18.8-45.1	4.0-5.0	0	0
	10-15	7.3-17.3	---	6.1-6.5	0	0
	15-28	0.2-16.2	0.0-11.0	6.1-6.5	0	0
	28-152	0.2-4.9	---	6.1-6.5	0	0
Typic Cryaquents, gravelly, very poorly drained	0-4	83.2-131.3	---	5.0-7.0	0	0
	4-8	108.2-171.4	---	5.0-7.0	0	0
	8-16	0.1-8.2	---	5.0-7.0	0	0
	16-38	0.1-4.5	---	5.5-7.5	0	0
	38-152	0.1-4.5	---	5.5-7.5	0	0
20FPM:						
Typic Cryaquents, silty	0-3	---	22.2-92.9	4.3-6.3	0	0
	3-7	---	18.8-78.7	4.0-6.0	0	0
	7-9	0.1-17.0	0.0-16.0	4.5-6.5	0	0
	9-19	0.1-17.0	0.0-14.0	4.8-6.8	0	0
	19-29	0.1-17.0	0.0-14.0	5.0-7.0	0	0
	29-152	0.1-17.0	0.0-14.0	5.5-7.5	0	0
20FPY:						
Oxyaquic Cryorthents, sandy or gravelly	0-8	---	21.0-87.9	4.2-6.2	0	0
	8-15	0.1-9.0	0.0-8.0	4.5-6.5	0	0
	15-38	0.1-4.5	0.0-3.0	5.5-7.5	0	0
	38-152	0.1-4.5	0.0-3.0	5.8-7.5	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20FPY:						
Typic Cryaquents, sandy or gravelly---	0-5	---	14.2-59.6	3.5-5.5	0	0
	5-13	0.1-17.0	0.0-15.0	3.5-5.5	0	0
	13-43	0.1-28.0	0.0-15.0	4.5-6.5	0	0
	43-75	0.1-27.6	---	4.8-6.8	0	0
	75-152	0.1-27.6	---	4.8-6.8	0	0
20FPZ:						
Typic Cryorthents, gravelly------------	0-3	---	14.2-59.6	3.5-5.5	0	0
	3-8	0.1-9.0	0.0-8.0	4.0-6.0	0	0
	8-20	0.1-8.0	0.0-5.0	4.5-6.5	0	0
	20-30	0.1-4.5	---	5.0-7.0	0	0
	30-152	0.1-4.5	---	5.5-7.5	0	0
Typic Cryofluvents---	0-10	---	10.8-45.1	3.0-5.0	0	0
	10-13	0.1-17.0	0.0-15.0	3.5-5.5	0	0
	13-18	0.1-4.5	0.0-3.0	4.5-6.5	0	0
	18-23	0.1-17.0	0.0-15.0	4.0-6.0	0	0
	23-31	0.1-15.9	0.0-11.0	5.0-7.0	0	0
	31-36	0.1-4.5	0.0-3.0	5.0-7.0	0	0
	36-49	0.1-16.4	0.0-13.0	5.0-7.0	0	0
	49-152	0.1-4.5	0.0-3.0	5.5-7.5	0	0
20GP1:						
Gustavus-------------	0-12	65.0-130.0	13.9-62.0	3.1-5.5	0	0
	12-33	1.5-4.8	---	4.5-6.5	0	0
	33-68	1.5-4.8	---	5.5-6.5	0	0
	68-140	1.5-4.8	---	6.1-7.1	0	0
	140-150	0.9-3.2	---	7.0-7.5	0	0
Ibach----------------	0-9	75.0-100.0	15.2-52.0	4.2-5.2	0	0
	9-27	5.0-20.0	1.9-5.0	3.7-5.3	0	0
	27-56	2.0-18.0	1.8-5.0	4.5-5.9	0	0
	56-73	2.0-14.0	1.8-5.0	5.0-6.1	0	0
	73-150	2.9-13.5	---	5.2-6.4	0	0
Scidmore-------------	0-3	60.8-131.4	---	5.5-7.0	0	0
	3-9	3.1-8.5	---	6.8-6.8	0	0
	9-31	2.1-4.8	---	6.8-8.0	0-1	0
	31-50	0.9-4.8	---	7.2-8.2	0-5	0
	50-150	0.9-4.8	---	7.5-8.3	0-5	0
20HI1:						
Foad-----------------	0-5	55.0-130.0	13.9-42.0	3.5-4.3	0	0
	5-10	75.0-160.0	14.7-44.0	3.8-4.4	0	0
	10-15	13.0-23.0	3.2-6.3	4.5-4.6	0	0
	15-84	13.0-23.0	3.2-6.3	4.9-5.4	0	0
	84-200	---	---	---	---	---
Boussole-------------	0-10	55.0-130.0	10.1-33.5	3.5-4.5	0	0
	10-28	70.0-155.0	11.0-37.0	3.5-4.5	0	0
	28-41	5.0-24.0	2.5-5.1	4.0-5.3	0	0
	41-51	3.0-20.0	2.5-5.0	4.8-5.5	0	0
	51-200	---	---	---	---	---
20HI2:						
Kashoto--------------	0-18	65.0-100.0	10.0-28.3	3.2-3.8	0	0
	18-56	55.0-130.0	9.6-31.7	3.2-4.4	0	0
	56-150	75.0-155.0	13.4-44.2	3.8-4.7	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20HI2:						
Foad	0-5	55.0-130.0	13.9-42.0	3.5-4.3	0	0
	5-10	75.0-160.0	14.7-44.0	3.8-4.4	0	0
	10-15	13.0-23.0	3.2-6.3	4.5-4.6	0	0
	15-84	13.0-23.0	3.2-6.3	4.9-5.4	0	0
	84-200	---	---	---	---	---
Kutskloh	0-9	60.0-135.0	24.4-73.0	4.4-6.2	0	0
	9-21	85.0-165.0	23.0-77.0	5.3-5.4	0	0
	21-30	17.0-24.0	2.0-9.0	4.3-5.2	0	0
	30-150	17.0-24.0	2.0-9.0	4.3-5.2	0	0
20HI3:						
Polkapenn	0-10	65.3-103.0	---	5.1-6.2	0	0
	10-22	4.0-6.1	---	5.8-6.3	0	0
	22-42	4.0-6.1	---	6.0-6.9	0	0
	42-200	---	---	---	---	---
Dagelet	0-3	60.0-135.0	22.0-72.9	5.2-5.7	0	0
	3-8	3.1-7.9	---	5.7-5.9	0	0
	8-37	2.9-7.9	---	5.9-7.3	0	0
	37-60	2.0-20.0	1.8-5.0	5.0-6.0	0	0
	60-200	---	---	---	---	---
Nunatak	0-3	60.0-135.0	22.0-72.9	5.0-5.4	0	0
	3-10	5.8-9.7	---	5.2-5.7	0	0
	10-36	4.6-9.5	---	5.3-6.7	0	0
	36-113	4.6-9.6	---	6.3-7.3	0	0
	113-200	---	---	---	---	---
20HI5:						
Kaknau	0-4	64.2-134.7	---	6.3-6.8	0	0
	4-12	1.1-5.2	---	6.1-6.3	0	0
	12-40	1.1-5.1	---	5.5-5.9	0	0
	40-87	3.7-6.8	---	5.5-6.0	0	0
	87-200	---	---	---	---	---
Tricklake	0-4	72.4-135.7	---	6.5-6.9	0	0
	4-22	1.1-8.0	---	6.2-6.5	0	0
	22-56	1.1-5.1	---	6.0-6.3	0	0
	56-150	1.1-3.2	---	6.0-6.3	0	0
20HIB:						
Drybay	0-2	64.5-135.0	---	6.6-6.8	0	0
	2-11	2.9-9.4	---	5.6-7.5	0	0
	11-24	2.5-9.2	---	5.2-6.9	0	0
	24-60	0.1-2.1	---	7.9-8.1	1-2	0
	60-150	0.1-2.1	---	7.6-8.3	0-2	0
Kaknau	0-4	64.2-134.7	---	6.3-6.8	0	0
	4-12	1.1-5.2	---	6.1-6.3	0	0
	12-40	1.1-5.1	---	5.5-5.9	0	0
	40-87	3.7-6.8	---	5.5-6.0	0	0
	87-200	---	---	---	---	---
Vivid	0-8	61.8-132.4	---	4.9-6.7	0	0
	8-28	4.6-11.4	---	7.1-8.0	0-5	0
	28-150	4.6-12.2	---	6.9-7.9	0-5	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20HID:						
Grandplateau	0-2	75.2-166.8	---	5.9-6.3	0	0
	2-18	15.4-22.1	---	5.8-6.4	0	0
	18-27	12.8-25.9	---	5.4-6.4	0	0
	27-43	5.9-25.9	---	5.3-6.4	0	0
	43-120	5.9-25.9	---	5.3-6.4	0	0
	120-130	5.9-25.0	---	5.3-6.1	0	0
	130-200	---	---	---	---	---
Crillon	0-10	3.1-9.8	---	5.5-5.9	0	0
	10-20	2.0-5.1	---	5.7-5.9	0	0
	20-60	1.0-10.0	0.7-3.2	5.5-5.7	0	0
	60-80	---	---	---	---	---
	80-200	---	---	---	---	---
20HIE:						
Kashoto	0-18	65.0-100.0	10.0-28.3	3.2-3.8	0	0
	18-56	55.0-130.0	9.6-31.7	3.2-4.4	0	0
	56-150	75.0-155.0	13.4-44.2	3.8-4.7	0	0
Kutskloh	0-9	60.0-135.0	24.4-73.0	4.4-6.2	0	0
	9-21	85.0-165.0	23.0-77.0	5.3-5.4	0	0
	21-30	17.0-24.0	2.0-9.0	4.3-5.2	0	0
	30-150	17.0-24.0	2.0-9.0	4.3-5.2	0	0
Wachusett	0-23	55.0-130.0	11.1-37.7	3.6-4.8	0	0
	23-34	70.0-155.0	11.0-37.0	3.7-4.1	0	0
	34-41	5.0-25.0	4.4-19.3	4.0-4.5	0	0
	41-60	5.0-25.0	3.1-14.2	4.5-5.2	0	0
	60-80	5.0-15.0	4.0-7.1	5.1-5.3	0	0
	80-85	4.5-9.4	---	6.1-6.9	0	0
	85-200	---	---	---	---	---
20HIF:						
Kashoto	0-18	65.0-100.0	10.0-28.3	3.2-3.8	0	0
	18-56	55.0-130.0	9.6-31.7	3.2-4.4	0	0
	56-150	75.0-155.0	13.4-44.2	3.8-4.7	0	0
Wachusett	0-23	55.0-130.0	11.1-37.7	3.6-4.8	0	0
	23-34	70.0-155.0	11.0-37.0	3.7-4.1	0	0
	34-41	5.0-23.0	4.4-19.3	4.0-4.5	0	0
	41-60	5.0-25.0	3.1-14.2	4.5-5.2	0	0
	60-80	4.5-12.0	4.0-7.1	5.1-5.3	0	0
	80-85	4.5-9.4	---	6.1-6.9	0	0
	85-200	---	---	---	---	---
20HIN:						
Polkapenn	0-10	65.3-103.0	---	5.1-6.2	0	0
	10-22	4.0-6.1	---	5.8-6.3	0	0
	22-42	4.0-6.1	---	6.0-6.9	0	0
	42-200	---	---	---	---	---
Nunatak	0-3	60.0-135.0	22.0-72.9	5.0-5.4	0	0
	3-10	5.8-9.7	---	5.2-5.7	0	0
	10-36	4.6-9.5	---	5.3-6.7	0	0
	36-113	4.6-9.6	---	6.3-7.3	0	0
	113-200	---	---	---	---	---

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20HIS:						
Lithic Cryorthents, rugged summit-------	0-3	---	14.2-28.9	3.6-4.5	0	0
	3-6	6.0-17.0	5.0-16.0	4.5-6.0	0	0
	6-36	0.1-16.0	0.0-10.0	4.5-6.0	0	0
	36-200	---	---	---	0	0
Typic Humicryepts, high elevation------	0-10	---	14.2-28.9	3.6-4.3	0	0
	10-28	0.1-10.0	0.0-6.0	4.5-5.0	0	0
	28-35	0.1-17.8	---	5.6-6.0	0	0
	35-51	0.1-17.3	---	5.6-6.0	0	0
	51-152	0.1-17.0	---	6.1-6.5	0	0
20IS1:						
Cenotaph-------------	0-17	71.0-137.0	---	4.8-6.5	0	0
	17-25	9.1-11.4	---	7.5-7.9	0-1	0
	25-100	7.0-11.4	---	7.5-8.0	0-5	0
	100-150	2.7-6.7	---	7.6-8.0	0-5	0
20LF1:						
Abyss----------------	0-13	9.1-16.8	---	7.3-7.8	0	0.5-2.5
	13-30	1.0-5.0	---	7.3-7.8	0	0.5-2.5
	30-150	1.0-5.0	---	7.3-7.8	0	0.5-2.5
Astrolable-----------	0-25	14.5-21.4	---	7.0-7.5	0	0.1-1.9
	25-150	0.9-4.6	---	7.2-7.6	0	0.1-1.9
20MD1:						
Gustavus-------------	0-12	65.0-130.0	13.9-62.0	3.1-5.5	0	0
	12-33	1.5-4.8	---	4.5-6.5	0	0
	33-68	1.5-4.8	---	5.5-6.5	0	0
	68-140	1.5-4.8	---	6.1-7.1	0	0
	140-150	0.9-3.2	---	7.0-7.5	0	0
Perouse--------------	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0
20MF1:						
Geikie---------------	0-7	5.0-15.0	4.4-7.0	5.3-5.8	0	0
	7-32	5.0-15.0	4.4-8.6	5.3-6.2	0	0
	32-48	10.1-18.0	---	5.5-7.0	0	0
	48-120	0.1-2.2	---	7.0-8.7	0-5	0
	120-150	0.1-2.2	---	7.0-8.7	0-5	0
Gustavus-------------	0-12	65.0-130.0	13.9-62.0	3.1-5.5	0	0
	12-33	1.5-4.8	---	4.5-6.5	0	0
	33-68	1.5-4.8	---	5.5-6.5	0	0
	68-140	1.5-4.8	---	6.1-7.1	0	0
	140-150	0.9-3.2	---	7.0-7.5	0	0
Scidmore-------------	0-3	60.8-131.4	---	5.5-7.0	0	0
	3-9	3.1-8.5	---	6.8-6.8	0	0
	9-31	2.1-4.8	---	6.8-8.0	0-1	0
	31-50	0.9-4.8	---	7.2-8.2	0-5	0
	50-150	0.9-4.8	---	7.5-8.3	0-5	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20MF2:						
Gustavus-------------	0-12	65.0-130.0	13.9-62.0	3.1-5.5	0	0
	12-33	1.5-4.8	---	4.5-6.5	0	0
	33-68	1.5-4.8	---	5.5-6.5	0	0
	68-140	1.5-4.8	---	6.1-7.1	0	0
	140-150	0.9-3.2	---	7.0-7.5	0	0
Geikie---------------	0-7	5.0-15.0	4.4-7.0	5.3-5.8	0	0
	7-32	5.0-15.0	4.4-8.6	5.3-6.2	0	0
	32-48	10.1-18.0	---	5.5-7.0	0	0
	48-120	0.1-2.2	---	7.0-8.7	0-5	0
	120-150	0.1-2.2	---	7.0-8.7	0-5	0
20MT1:						
Bearisland-----------	0-2	64.9-103.0	---	4.3-6.5	0	0
	2-24	3.6-8.4	---	7.2-8.0	0-1	0
	24-150	5.4-9.8	---	7.7-8.3	0-2	0
Kadachan-------------	0-11	0.9-4.6	---	6.1-6.8	0	0
	11-18	0.9-4.6	---	5.1-6.8	0	0
	18-150	0.9-4.6	---	5.2-6.3	0	0
20MT2:						
Escures--------------	0-4	60.5-132.7	---	5.6-6.0	0	0
	4-10	3.8-9.6	---	6.4-6.6	0	0
	10-25	3.8-9.6	---	6.6-7.2	0	0
	25-54	3.8-9.6	---	7.2-7.8	0	0
	54-200	---	---	---	---	---
Polkapenn------------	0-10	65.3-103.0	---	5.1-6.2	0	0
	10-22	4.0-6.1	---	5.8-6.3	0	0
	22-42	4.0-6.1	---	6.0-6.9	0	0
	42-200	---	---	---	---	---
Nunatak--------------	0-3	60.0-135.0	22.0-72.9	5.0-5.4	0	0
	3-10	5.8-9.7	---	5.2-5.7	0	0
	10-36	4.6-9.5	---	5.3-6.7	0	0
	36-113	4.6-9.6	---	6.3-7.3	0	0
	113-200	---	---	---	---	---
20MT3:						
Polkapenn------------	0-10	65.3-103.0	---	5.1-6.2	0	0
	10-22	4.0-6.1	---	5.8-6.3	0	0
	22-42	4.0-6.1	---	6.0-6.9	0	0
	42-200	---	---	---	---	---
Bearisland-----------	0-2	64.9-103.0	---	4.3-6.5	0	0
	2-24	3.6-8.4	---	7.2-8.0	0-1	0
	24-150	5.4-9.8	---	7.7-8.3	0-2	0
Enigma---------------	0-10	4.9-9.7	---	6.4-8.0	0-4	0
	10-62	2.0-7.9	---	7.0-8.4	0-5	0
	62-200	---	---	---	---	---
20MT4:						
Seclusion------------	0-9	70.0-135.0	24.4-69.0	5.2-5.5	0	0
	9-15	4.8-9.7	---	6.0-7.9	0-5	0
	15-40	4.6-7.9	---	7.9-8.5	1-5	0
	40-200	---	---	---	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20MT5:						
Seclusion	0-9	70.0-135.0	24.4-69.0	5.2-5.5	0	0
	9-15	4.8-9.7	---	6.0-7.9	0-5	0
	15-40	4.6-7.9	---	7.9-8.5	1-5	0
	40-200	---	---	---	0	0
Skarn	0-8	60.0-130.0	19.5-58.0	4.9-5.7	0	0
	8-14	10.0-25.0	8.5-10.5	5.5-6.1	0	0
	14-60	16.4-18.5	---	6.8-8.0	0-1	0
	60-104	16.4-19.3	---	7.5-8.1	0-1	0
	104-200	---	---	---	---	---
20MT6:						
Bergbay	0-8	55.0-130.0	13.1-44.7	4.0-5.3	0	0
	8-37	5.0-22.0	2.5-5.1	4.2-5.5	0	0
	37-70	2.5-10.0	2.3-4.9	5.3-5.7	0	0
	70-200	---	---	---	---	---
Boussole	0-10	55.0-130.0	10.1-33.5	3.5-4.5	0	0
	10-28	70.0-155.0	11.0-37.0	3.5-4.5	0	0
	28-41	5.0-24.0	2.5-5.1	4.0-5.3	0	0
	41-51	3.0-20.0	2.5-5.0	4.8-5.5	0	0
	51-200	---	---	---	---	---
Toyatte	0-16	55.0-130.0	15.6-47.0	4.3-4.6	0	0
	16-32	75.0-160.0	14.0-47.0	4.4-4.6	0	0
	32-42	4.5-19.0	4.1-13.7	4.6-5.3	0	0
	42-200	---	---	---	---	---
20MT7:						
Foad	0-5	55.0-130.0	13.9-42.0	3.5-4.3	0	0
	5-10	75.0-160.0	14.7-44.0	3.8-4.4	0	0
	10-15	13.0-23.0	3.2-6.3	4.5-4.6	0	0
	15-84	13.0-23.0	3.2-6.3	4.9-5.4	0	0
	84-200	---	---	---	---	---
Abdallah	0-3	65.0-100.0	17.5-49.4	4.5-4.7	0	0
	3-20	3.0-7.0	1.9-4.5	4.3-4.7	0	0
	20-150	5.0-6.0	1.8-4.4	4.3-4.7	0	0
Justicecreek	0-11	75.0-160.0	14.0-47.0	4.2-4.7	0	0
	11-22	75.0-160.0	16.0-52.0	4.2-4.7	0	0
	22-200	---	---	---	---	---
20MTC:						
Skarn	0-8	60.0-130.0	19.5-58.0	4.9-5.7	0	0
	8-14	10.0-25.0	8.5-10.5	5.5-6.1	0	0
	14-60	16.4-18.5	---	6.8-8.0	0-1	0
	60-104	16.4-19.3	---	7.5-8.1	0-1	0
	104-200	---	---	---	---	---
Polkapenn	0-10	65.3-103.0	---	5.1-6.2	0	0
	10-22	4.0-6.1	---	5.8-6.3	0	0
	22-42	4.0-6.1	---	6.0-6.9	0	0
	42-200	---	---	---	---	---
Kadachan	0-11	0.9-4.6	---	6.1-6.8	0	0
	11-18	0.9-4.6	---	5.1-6.8	0	0
	18-150	0.9-4.6	---	5.2-6.3	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20MTE:						
Wachusett	0-23	55.0-130.0	11.1-37.7	3.6-4.8	0	0
	23-34	70.0-155.0	11.0-37.0	3.7-4.1	0	0
	34-41	5.0-25.0	4.4-19.3	4.0-4.5	0	0
	41-60	5.0-25.0	3.1-14.2	4.5-5.2	0	0
	60-80	4.5-15.0	4.0-7.1	5.1-5.3	0	0
	80-85	4.5-9.4	---	6.1-6.9	0	0
	85-200	---	---	---	---	---
Maquinna	0-10	65.0-105.0	5.2-15.9	2.9-4.0	0	0
	10-33	50.0-125.0	7.1-24.0	3.0-3.5	0	0
	33-75	5.0-22.0	3.1-8.9	3.6-3.9	0	0
	75-107	10.0-20.0	5.5-10.5	4.6-5.3	0	0
	107-200	---	---	---	---	---
Boussole	0-10	55.0-130.0	10.1-33.5	3.5-4.5	0	0
	10-28	70.0-155.0	11.0-37.0	3.5-4.5	0	0
	28-41	5.0-24.0	2.5-5.1	4.0-5.3	0	0
	41-51	3.0-20.0	2.5-5.0	4.8-5.5	0	0
	51-200	---	---	---	---	---
20MTF:						
Wachusett	0-23	55.0-130.0	11.1-37.7	3.6-4.8	0	0
	23-34	70.0-155.0	11.0-37.0	3.7-4.1	0	0
	34-41	5.0-25.0	4.4-19.3	4.0-4.5	0	0
	41-60	5.0-25.0	3.1-14.2	4.5-5.2	0	0
	60-80	5.0-15.0	4.0-7.1	5.1-5.3	0	0
	80-85	4.5-9.4	---	6.1-6.9	0	0
	85-200	---	---	---	---	---
Maquinna	0-10	65.0-105.0	5.2-15.9	2.9-4.0	0	0
	10-33	50.0-125.0	7.1-24.0	3.0-3.5	0	0
	33-75	5.0-22.0	3.1-8.9	3.6-3.9	0	0
	75-107	10.0-20.0	5.5-10.5	4.6-5.3	0	0
	107-200	---	---	---	---	---
Enigma	0-10	4.9-9.7	---	6.4-8.0	0-4	0
	10-62	2.0-7.9	---	7.0-8.4	0-5	0
	62-200	---	---	---	---	---
20OC1:						
Scidmore	0-3	60.8-131.4	---	5.5-7.0	0	0
	3-9	3.1-8.5	---	6.8-6.8	0	0
	9-31	2.1-4.8	---	6.8-8.0	0-1	0
	31-50	0.9-4.8	---	7.2-8.2	0-5	0
	50-150	0.9-4.8	---	7.5-8.3	0-5	0
Perouse, frequently ponded	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0
20OD1:						
Gustavus	0-12	65.0-130.0	13.9-62.0	3.1-5.5	0	0
	12-33	1.5-4.8	---	4.5-6.5	0	0
	33-68	1.5-4.8	---	5.5-6.5	0	0
	68-140	1.5-4.8	---	6.1-7.1	0	0
	140-150	0.9-3.2	---	7.0-7.5	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20OD1:						
Lamplugh	0-15	50.0-125.0	7.7-25.4	3.3-3.7	0	0
	15-19	65.0-150.0	13.4-30.0	3.3-3.7	0	0
	19-21	6.0-24.0	5.8-19.3	4.4-5.4	0	0
	21-35	5.0-15.0	4.5-8.8	4.7-5.6	0	0
	35-54	21.7-25.8	---	5.8-6.1	0	0
	54-70	4.6-11.4	---	6.1-7.1	0	0
	70-150	20.6-24.6	---	6.1-7.2	0	0
20ODF:						
Glacierbay	0-8	4.9-14.1	---	5.5-6.0	0	0
	8-25	4.3-15.6	---	5.5-6.2	0	0
	25-58	13.8-20.1	---	7.9-8.3	1-5	0
	58-100	1.0-3.1	---	7.9-8.3	1-5	0
	100-130	1.0-3.1	---	7.9-8.3	1-5	0
	130-150	1.0-3.1	---	7.9-8.5	1-5	0
Geikie	0-7	5.0-15.0	4.4-7.0	5.3-5.8	0	0
	7-32	5.0-15.0	4.4-8.6	5.3-6.2	0	0
	32-48	10.1-18.0	---	5.5-7.0	0	0
	48-120	0.1-2.2	---	7.0-8.7	0-5	0
	120-150	0.1-2.2	---	7.0-8.7	0-5	0
20OP1:						
Fossil	0-10	61.8-132.4	---	5.3-6.4	0	0
	10-27	0.1-1.1	---	6.8-7.7	0	0
	27-50	0.1-1.1	---	7.3-8.7	0-5	0
	50-95	0.1-1.1	---	7.1-8.2	0-5	0
	95-150	0.1-1.1	---	7.1-8.7	0-5	0
Tyeen	0-4	61.8-132.4	---	4.7-5.9	0	0
	4-12	4.9-11.4	---	5.1-8.0	0-1	0
	12-50	4.5-11.1	---	7.7-8.0	0-1	0
	50-150	4.6-14.7	---	6.8-8.4	0-1	0
Vivid	0-8	61.8-132.4	---	4.9-6.7	0	0
	8-28	4.6-11.4	---	7.1-8.0	0-5	0
	28-150	4.6-12.2	---	6.9-7.9	0-5	0
20OP4:						
Kashoto	0-18	65.0-100.0	10.0-28.3	3.2-3.8	0	0
	18-56	55.0-130.0	9.6-31.7	3.2-4.4	0	0
	56-150	75.0-155.0	13.4-44.2	3.8-4.7	0	0
Annoksek	0-3	65.0-100.0	15.6-44.2	3.8-4.5	0	0
	3-12	75.0-160.0	15.8-52.3	3.9-4.8	0	0
	12-30	8.0-9.0	5.5-8.9	4.3-5.4	0	0
	30-200	---	---	---	0	0
Bulky	0-5	55.0-130.0	13.1-44.7	4.0-4.2	0	0
	5-25	2.0-18.0	1.7-8.3	5.4-6.0	0	0
	25-50	3.7-14.8	---	5.4-7.5	0	0
	50-150	0.1-2.3	---	6.5-7.1	0	0
20OP5:						
Fossil	0-10	61.8-132.4	---	5.3-6.4	0	0
	10-27	0.1-1.1	---	6.8-7.7	0	0
	27-50	0.1-1.1	---	7.3-8.7	0-5	0
	50-95	0.1-1.1	---	7.1-8.2	0-5	0
	95-150	0.1-1.1	---	7.1-8.7	0-5	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20OP5:						
Tyeen	0-4	61.8-132.4	---	4.7-5.9	0	0
	4-12	4.9-11.4	---	5.1-8.0	0-1	0
	12-50	4.5-11.1	---	7.7-8.0	0-1	0
	50-150	4.6-14.7	---	6.8-8.4	0-1	0
Vivid	0-8	61.8-132.4	---	4.9-6.7	0	0
	8-28	4.6-11.4	---	7.1-8.0	0-5	0
	28-150	4.6-12.2	---	6.9-7.9	0-5	0
20OP6:						
Bulky	0-5	55.0-130.0	13.1-44.7	4.0-4.2	0	0
	5-25	2.0-18.0	1.7-8.3	5.4-6.0	0	0
	25-50	3.7-14.8	---	5.4-7.5	0	0
	50-150	0.1-2.3	---	6.5-7.1	0	0
Bertha	0-3	61.8-103.0	---	6.0-6.8	0	0
	3-13	0.1-1.1	---	6.0-7.0	0	0
	13-22	0.1-1.1	---	6.0-7.0	0	0
	22-150	0.1-1.1	---	6.0-7.0	0	0
Icy	0-20	62.9-137.2	---	6.5-6.9	0	0
	20-89	14.6-23.6	---	6.8-7.6	0	0
	89-119	14.6-23.6	---	7.0-8.0	0-1	0
	119-150	0.1-4.9	---	7.1-8.0	0-1	0
20OPE:						
Tyeen	0-4	61.8-132.4	---	4.7-5.9	0	0
	4-12	4.9-11.4	---	5.1-8.0	0-1	0
	12-50	4.5-11.1	---	7.7-8.0	0-1	0
	50-150	4.6-14.7	---	6.8-8.4	0-1	0
Shagcove	0-3	65.0-103.0	---	6.0-6.1	0	0
	3-7	4.5-8.4	---	6.0-7.4	0	0
	7-49	2.3-6.1	---	7.0-8.0	0-2	0
	49-60	2.3-6.1	---	7.0-8.0	0-2	0
	60-150	0.1-4.6	---	7.4-8.4	0-1	0
Puffin	0-70	0.1-6.1	---	5.6-7.9	0-1	0
	70-150	0.1-4.6	---	7.2-8.1	0-1	0
20OV1:						
Perouse, frequently ponded	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0
Perouse	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0
20OW1:						
Perouse	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20OW1:						
Gustavus	0-12	65.0-130.0	13.9-62.0	3.1-5.5	0	0
	12-33	1.5-4.8	---	4.5-6.5	0	0
	33-68	1.5-4.8	---	5.5-6.5	0	0
	68-140	1.5-4.8	---	6.1-7.1	0	0
	140-150	0.9-3.2	---	7.0-7.5	0	0
Perouse, frequently ponded	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0
20OWF:						
Fairweather	0-2	72.9-103.4	---	5.0-7.0	0	0
	2-5	5.8-14.1	---	6.0-7.1	0	0.0-1.0
	5-38	5.5-13.7	---	6.7-7.9	0-2	0.0-3.8
	38-150	1.0-3.1	---	7.3-8.5	0-3	0.0-3.7
Icy	0-20	62.9-137.2	---	6.5-6.9	0	0
	20-89	14.6-23.6	---	6.8-7.6	0	0
	89-119	14.6-23.6	---	7.0-8.0	0-1	0
	119-150	0.1-4.9	---	7.1-8.0	0-1	0
20PL1:						
Tyeen	0-4	61.8-132.4	---	4.7-5.9	0	0
	4-12	4.9-11.4	---	5.1-8.0	0-1	0
	12-50	4.5-11.1	---	7.7-8.0	0-1	0
	50-150	4.6-14.7	---	6.8-8.4	0-1	0
Cenotaph	0-17	71.0-137.0	---	4.8-6.5	0	0
	17-25	9.1-11.4	---	7.5-7.9	0-1	0
	25-100	7.0-11.4	---	7.5-8.0	0-5	0
	100-150	2.7-6.7	---	7.6-8.0	0-5	0
Fossil	0-10	61.8-132.4	---	5.3-6.4	0	0
	10-27	0.1-1.1	---	6.8-7.7	0	0
	27-50	0.1-1.1	---	7.3-8.7	0-5	0
	50-95	0.1-1.1	---	7.1-8.2	0-5	0
	95-150	0.1-1.1	---	7.1-8.7	0-5	0
20PL2:						
Tyeen	0-4	61.8-132.4	---	4.7-5.9	0	0
	4-12	4.9-11.4	---	5.1-8.0	0-1	0
	12-50	4.5-11.1	---	7.7-8.0	0-1	0
	50-150	4.6-14.7	---	6.8-8.4	0-1	0
Fossil	0-10	61.8-132.4	---	5.3-6.4	0	0
	10-27	0.1-1.1	---	6.8-7.7	0	0
	27-50	0.1-1.1	---	7.3-8.7	0-5	0
	50-95	0.1-1.1	---	7.1-8.2	0-5	0
	95-150	0.1-1.1	---	7.1-8.7	0-5	0
Fingers	0-2	64.3-103.0	---	5.1-6.9	0	0
	2-8	0.9-6.1	---	5.7-7.4	0	0
	8-43	1.6-4.6	---	6.6-8.3	0-3	0
	43-150	1.6-4.6	---	7.0-8.5	0-3	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20PL3:						
Kashoto	0-18	65.0-100.0	10.0-28.3	3.2-3.8	0	0
	18-56	55.0-130.0	9.6-31.7	3.2-4.4	0	0
	56-150	75.0-155.0	13.4-44.2	3.8-4.7	0	0
Annoksek	0-3	65.0-100.0	15.6-44.2	3.8-4.5	0	0
	3-12	75.0-160.0	15.8-52.3	3.9-4.8	0	0
	12-30	8.0-9.0	5.5-8.9	4.3-5.4	0	0
	30-200	---	---	---	0	0
Ancon	0-8	55.0-125.0	11.0-28.0	3.7-4.3	0	0
	8-21	40.0-60.0	3.1-6.2	4.2-4.5	0	0
	21-24	40.0-60.0	2.6-17.1	4.2-5.1	0	0
	24-53	40.0-60.0	3.0-6.1	4.5-5.6	0	0
	53-103	7.1-12.9	---	5.0-5.9	0	0
	103-200	---	---	---	---	---
20PL6:						
Tidalwave	0-4	90.0-174.0	---	5.5-6.2	0	0
	4-16	2.9-5.1	---	6.0-6.5	0	0
	16-24	2.6-4.9	---	6.0-6.5	0	0
	24-49	2.5-4.7	---	6.0-6.5	0	0
	49-150	0.1-1.1	---	6.0-6.8	0	0
Drybay	0-2	64.5-135.0	---	6.6-6.8	0	0
	2-11	2.9-9.4	---	5.6-7.5	0	0
	11-24	2.5-9.2	---	5.2-6.9	0	0
	24-60	0.1-2.1	---	7.9-8.1	1-2	0
	60-150	0.1-2.1	---	7.6-8.3	0-2	0
Puffin	0-70	0.1-6.1	---	5.6-7.9	0-1	0
	70-150	0.1-4.6	---	7.2-8.1	0-1	0
20PLD:						
Typic Cryaquents, sandy	0-7	---	10.8-45.1	3.0-5.0	0	0
	7-15	0.1-17.0	0.0-16.0	4.5-6.5	0	0
	15-32	0.1-15.0	---	4.6-6.6	0	0
	32-51	0.1-8.2	---	4.9-6.9	0	0
	51-72	0.1-8.2	---	4.9-6.9	0	0
	72-152	0.1-8.2	---	5.5-7.5	0	0
Typic Cryorthents, sandy, rarely flooded	0-8	---	18.8-78.7	4.0-6.0	0	0
	8-20	0.1-9.0	0.0-8.0	4.5-6.5	0	0
	20-46	0.1-4.5	---	4.6-6.6	0	0
	46-49	0.1-8.2	---	4.9-6.9	0	0
	49-152	0.1-4.5	---	5.5-7.5	0	0
20RW2:						
Oxyaquic Cryorthents, sandy or gravelly	0-8	---	21.0-87.9	4.2-6.2	0	0
	8-15	0.1-9.0	0.0-8.0	4.5-6.5	0	0
	15-38	0.1-4.5	0.0-3.0	5.5-7.5	0	0
	38-152	0.1-4.5	0.0-3.0	5.8-7.5	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20SC:						
Typic Cryopsamments, rarely flooded	0-5	---	18.8-45.1	4.0-5.0	0	0
	5-23	0.1-4.8	---	5.6-6.0	0	0
	23-152	0.1-4.2	---	7.9-8.4	1	0
20TE2:						
Tidalwave	0-4	90.0-174.0	---	5.5-6.2	0	0
	4-16	2.9-5.1	---	6.0-6.5	0	0
	16-24	2.6-4.9	---	6.0-6.5	0	0
	24-49	2.5-4.7	---	6.0-6.5	0	0
	49-150	0.1-1.1	---	6.0-6.8	0	0
Drybay	0-2	64.5-135.0	---	6.6-6.8	0	0
	2-11	2.9-9.4	---	5.6-7.5	0	0
	11-24	2.5-9.2	---	5.2-6.9	0	0
	24-60	0.1-2.1	---	7.9-8.1	1-2	0
	60-150	0.1-2.1	---	7.6-8.3	0-2	0
20TF1:						
Astrolable	0-25	14.5-21.4	---	7.0-7.5	0	0.1-1.9
	25-150	0.9-4.6	---	7.2-7.6	0	0.1-1.9
Murkbay	0-1	124.0-212.0	---	7.0-7.3	0	0
	1-3	0.9-2.9	---	7.3-8.0	0-3	0
	3-25	0.1-2.9	---	8.0-8.2	1-3	0
	25-80	0.1-2.9	---	8.0-8.2	1-3	0
	80-125	0.1-2.9	---	7.1-8.2	0-5	0
	125-150	0.1-2.9	---	7.0-8.5	1-5	0.3-2.0
20TF3:						
Astrolable	0-25	14.5-21.4	---	7.0-7.5	0	0.1-1.9
	25-150	0.9-4.6	---	7.2-7.6	0	0.1-1.9
Beartrack	0-2	60.0-130.0	21.8-65.0	5.0-5.4	0	0
	2-21	7.0-10.5	---	7.9-8.0	1-5	2.0-2.5
	21-40	6.2-11.4	---	7.9-8.4	1-5	2.0-5.5
	40-150	6.2-11.4	---	7.9-8.4	1-5	2.0-5.5
20TH1:						
Ibach	0-9	75.0-100.0	15.2-52.0	4.2-5.2	0	0
	9-27	5.0-20.0	1.9-5.0	3.7-5.3	0	0
	27-56	2.0-18.0	1.8-5.0	4.5-5.9	0	0
	56-73	2.0-14.0	1.8-5.0	5.0-6.1	0	0
	73-150	2.9-13.5	---	5.2-6.4	0	0
Lamplugh	0-15	50.0-125.0	7.7-25.4	3.3-3.7	0	0
	15-19	65.0-150.0	13.4-30.0	3.3-3.7	0	0
	19-21	6.0-24.0	5.8-19.3	4.4-5.4	0	0
	21-35	5.0-20.0	4.5-8.8	4.7-5.6	0	0
	35-54	21.7-25.8	---	5.8-6.1	0	0
	54-70	4.6-11.4	---	6.1-7.1	0	0
	70-150	20.6-24.6	---	6.1-7.2	0	0
Bartlettcove	0-12	55.0-130.0	16.7-55.2	4.7-4.8	0	0
	12-14	1.0-5.0	0.3-2.9	5.1-5.4	0	0
	14-30	0.9-2.5	---	5.4-6.4	0	0
	30-45	0.9-2.5	---	7.5-7.6	0	0
	45-150	0.9-2.5	---	6.3-7.7	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
20UM1:						
Bearisland-----------	0-2	64.9-103.0	---	4.3-6.5	0	0
	2-24	3.6-8.4	---	7.2-8.0	0-1	0
	24-150	5.4-9.8	---	7.7-8.3	0-2	0
20UM2:						
Bearisland-----------	0-2	64.9-103.0	---	4.3-6.5	0	0
	2-24	3.6-8.4	---	7.2-8.0	0-1	0
	24-150	5.4-9.8	---	7.7-8.3	0-2	0
20VBA:						
Typic Cryofluvents---	0-10	---	10.8-45.1	3.0-5.0	0	0
	10-13	0.1-17.0	0.0-15.0	3.5-5.5	0	0
	13-18	0.1-4.5	0.0-3.0	4.5-6.5	0	0
	18-23	0.1-17.0	0.0-15.0	4.0-6.0	0	0
	23-31	0.1-15.9	0.0-11.0	5.0-7.0	0	0
	31-36	0.1-4.5	0.0-3.0	5.0-7.0	0	0
	36-49	0.1-16.4	0.0-13.0	5.0-7.0	0	0
	49-152	0.1-4.5	0.0-3.0	5.5-7.5	0	0
Aquic Dystrocryepts, silty---------------	0-2	---	14.2-60.0	3.5-5.5	0	0
	2-3	---	14.2-60.0	3.5-5.5	0	0
	3-18	0.1-17.0	0.0-12.0	4.0-6.0	0	0
	18-34	0.1-16.0	0.0-15.0	4.5-6.5	0	0
	34-50	0.1-17.0	0.0-16.0	5.0-7.0	0	0
	50-67	0.1-17.0	0.0-9.0	5.5-7.5	0	0
	67-152	0.1-17.0	0.0-9.0	5.5-7.5	0	0
20WD1:						
Perouse--------------	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0
Scidmore-------------	0-3	60.8-131.4	---	5.5-7.0	0	0
	3-9	3.1-8.5	---	6.8-6.8	0	0
	9-31	2.1-4.8	---	6.8-8.0	0-1	0
	31-50	0.9-4.8	---	7.2-8.2	0-5	0
	50-150	0.9-4.8	---	7.5-8.3	0-5	0
Perouse, frequently ponded--------------	0-4	73.8-224.3	---	7.1-7.3	0	0
	4-9	96.6-180.5	---	6.8-7.3	0	0
	9-40	0.9-2.9	---	7.9-8.3	1-3	0
	40-60	0.9-2.9	---	7.9-8.5	1-5	0
	60-150	0.1-2.1	---	7.9-8.5	1-5	0
22HIA:						
Lithic Cryorthents, rugged summit-------	0-3	---	14.2-28.9	3.6-4.5	0	0
	3-6	6.0-17.0	5.0-16.0	4.5-6.0	0	0
	6-36	0.1-16.0	0.0-10.0	4.5-6.0	0	0
	36-200	---	---	---	0	0

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbon-ate	Salinity
	Cm	meq/100 g	meq/100 g	pH	Pct	mmhos/cm
22SM1:						
Woodlake-------------	0-9	55.0-130.0	12.6-41.8	3.5-5.5	0	0
	9-37	5.0-22.0	1.3-4.5	4.1-5.5	0	0
	37-70	4.0-20.0	3.5-6.1	5.2-6.8	0	0
	70-200	---	---	---	---	---
Flapjack-------------	0-4	55.0-130.0	11.7-47.0	3.5-5.5	0	0
	4-20	3.0-22.0	1.3-6.7	4.2-5.0	0	0
	20-64	3.0-21.0	1.3-6.2	4.5-5.5	0	0
	64-200	---	---	---	0	---

Table 19.—Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated. Depth to water table is based on a representative value)

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20AF1:									
Muirpoint	A								
		---	---	---	---	---	---	---	---
Puffin	A								
		May-Oct	0.7	1.5	---	---	None	Brief (2 to 7 days)	Frequent
20AF2:									
Entisols, alluvial fans, occasionally flooded	A								
		January	0.9	1.5	---	---	None	Long (7 to 30 days)	Occasional
		February	0.9	1.5	---	---	None	Long (7 to 30 days)	Occasional
		March	0.9	1.5	---	---	None	Long (7 to 30 days)	Occasional
		April	0.9	1.5	---	---	None	Long (7 to 30 days)	Occasional
		May	---	---	---	---	None	Long (7 to 30 days)	Occasional
		September	---	---	---	---	None	Long (7 to 30 days)	Occasional
		October	0.9	1.5	---	---	None	Long (7 to 30 days)	Occasional
		November	0.9	1.5	---	---	None	Long (7 to 30 days)	Occasional
		December	0.9	1.5	---	---	None	Long (7 to 30 days)	Occasional
20CL1:									
Strawberry	B/D								
		Jan-Dec	0.5	1.5	---	---	None	---	None
Fingerock	A								
		Jan-Dec	0.9	1.5	---	---	None	---	None
20CP1:									
Oberlin	B/D								
		April-Sept	0.2	1.5	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20CP1:									
Perouse, frequently ponded-	A/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		April	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		May	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		November	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		December	0.1	1.5	---	---	---	---	None
Perouse--------------------	A/D								
		Jan-Dec	0.1	1.5	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20CP2:									
Beaches.									
Monashka-------------------	A/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.1	1.5	---	---	---	---	None
		April	0.1	1.5	---	---	---	---	None
		May	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		November	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		December	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
Murkbay--------------------	A								
		---	---	---	---	---	---	---	---

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20CPF:									
Icy	B/D								
		January	0.0	1.5	---	---	---	---	None
		April	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		May	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20CPF:									
Excursion	A/D								
		January	0.0	1.5	---	---	---	---	None
		February	0.0	1.5	---	---	---	---	None
		March	0.0	1.5	---	---	---	---	None
		April	0.0	1.5	0.1-0.3	Long (7 to 30 days)	Frequent	---	None
		May	0.0	1.5	0.1-0.3	Long (7 to 30 days)	Frequent	---	None
		June	0.0	1.5	0.1-0.3	Long (7 to 30 days)	Frequent	---	None
		July	0.0	1.5	0.1-0.3	Long (7 to 30 days)	Frequent	---	None
		August	0.0	1.5	0.1-0.3	Long (7 to 30 days)	Frequent	---	None
		September	0.0	1.5	0.1-0.3	Long (7 to 30 days)	Frequent	---	None
		October	0.0	1.5	0.1-0.3	Long (7 to 30 days)	Frequent	---	None
		November	0.0	1.5	---	---	---	---	None
		December	0.0	1.5	---	---	---	---	None
20ED1:									
Gustavus	A								
		---	---	---	---	---	---	---	---
Bartlettcove	A								
		---	---	---	---	---	---	---	---
20ED2:									
Beardslee	A								
		---	---	---	---	---	---	---	---

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20ED2:									
Monashka	A/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.1	1.5	---	---	---	---	None
		April	0.1	1.5	---	---	---	---	None
		May	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		November	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
		December	0.0	1.5	0.0-0.1	Very long (more than 30 days)	Frequent	---	None
20FP1:									
Drybay	B								
		---	---	---	---	---	---	---	---
Tidalwave	B								
		May-Oct	0.8	1.5	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20FP2:									
Bertha	A								
		Apr-Oct	---	---	---	---	None	Brief (2 to 7 days)	Occasional
Puffin	A								
		May-Oct	0.7	1.5	---	---	None	Brief (2 to 7 days)	Frequent
20FP3:									
Tidalwave	B								
		May-Oct	0.8	1.5	---	---	None	---	None
Ashmun, frequently ponded	A/D								
		Jan-Dec	0.0	1.5	0.0-0.2	Very long (more than 30 days)	Frequent	---	None
		February	0.0	1.5	0.0-0.2	Very long	Frequent	---	None
Drybay	B								
		---	---	---	---	---	---	---	---
20FPL:									
Cryaquepts	B/D								
		Jan-Dec	0.2	1.5	---	---	None	Very brief (4 to 48 hours)	Frequent
Typic Cryaquents, gravelly very poorly drained	A/D								
		Jan-Dec	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Very brief (4 to 48 hours)	Frequent
Water.									
20FPM:									
Typic Cryaquents, silty	B/D								
		Jan-Dec	0.2	1.5	---	---	Rare	Brief (2 to 7 days)	Occasional
20FPY:									
Oxyaquic Cryorthents, sandy or gravelly	A								
		Jan-Dec	1.0	1.5	---	---	None	---	Rare

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			m	m	m				
20FPY:									
Typic Cryaquents, sandy or gravelly	B/D	Jan-Dec	0.2	1.5	0.0-0.1	---	Rare	Brief (2 to 7 days)	Occasional
20FPZ:									
Typic Cryorthents, gravelly	A	Jan-Dec	---	---	---	---	None	---	Very rare
Typic Cryofluvents	A	Jan-Dec	---	---	---	---	None	Brief (2 to 7 days)	Occasional
20GP1:									
Gustavus	A	---	---	---	---	---	---	---	---
Ibach	C	---	---	---	---	---	---	---	---
Scidmore	A/D	May-Nov	0.5	1.5	---	---	None	---	None
20HI1:									
Foad	C	---	---	---	---	---	---	---	---
Boussole	D	Jan-Dec	0.4	0.5	---	---	None	---	None
20HI2:									
Kashoto	A/D	Apr-Sept	0.2	1.5	---	---	None	---	None
Foad	C	---	---	---	---	---	---	---	---
Kutskloh	B/D	Apr-Nov	0.3	1.5	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20HI3:									
Polkapenn	D	---	---	---	---	---	---	---	---
Dagelet	A	---	---	---	---	---	---	---	---
Nunatak	A	---	---	---	---	---	---	---	---
20HI5:									
Kaknau	C	---	---	---	---	---	---	---	---
Tricklake	B	---	---	---	---	---	---	---	---
20HIB:									
Drybay	B	---	---	---	---	---	---	---	---
Kaknau	C	---	---	---	---	---	---	---	---
Vivid	B/D	Jan-Dec	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Occasional	---	None
20HID:									
Grandplateau	B/D	Jan-Dec	0.2	1.3	---	---	None	---	None
Crillon	D	Jan-Dec	0.5	0.6	---	---	None	---	None
20HIE:									
Kashoto	A/D	Apr-Sept	0.2	1.5	---	---	None	---	None
Kutskloh	B/D	Apr-Nov	0.3	1.5	---	---	None	---	None
Wachusett	C	Jan-Dec	0.6	0.9	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20HIF:									
Kashoto	A/D								
		Apr-Sept	0.2	1.5	---	---	None	---	None
Wachusett	C								
		Jan-Dec	0.6	0.9	---	---	None	---	None
20HIN:									
Polkapenn	D								
		---	---	---	---	---	---	---	---
Nunatak	A								
		---	---	---	---	---	---	---	---
20HIS:									
Lithic Cryorthents, rugged summit	C/D								
		Oct-Nov	0.3	0.4	---	---	None	---	None
Typic Humicryepts, high elevation	C								
		January	0.7	1.5	---	---	None	---	None
		February	0.7	1.5	---	---	None	---	None
		March	0.7	1.5	---	---	None	---	None
		September	0.7	1.5	---	---	None	---	None
		October	0.7	1.5	---	---	None	---	None
		November	0.7	1.5	---	---	None	---	None
		December	0.7	1.5	---	---	None	---	None
20IS1:									
Cenotaph	B/D								
		Jan-Dec	0.3	1.5	---	---	None	---	None
Water.									
Beaches.									
20LF1:									
Abyss	A/D								
		Jan-Dec	0.3	1.5	---	---	None	Very brief (4 to 48 hours)	Occasional
Astrolable	C/D								
		Jan-Dec	0.0	1.5	---	---	None	Very brief (4 to 48 hours)	Very frequent

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20MD1:									
Gustavus	A	---	---	---	---	---	---	---	---
Perouse	A/D	Jan-Dec	0.1	1.5	---	---	None	---	None
20MF1:									
Geikie	B	---	---	---	---	---	---	---	---
Gustavus	A	---	---	---	---	---	---	---	---
Scidmore	A/D	May-Nov	0.5	1.5	---	---	None	---	None
20MF2:									
Gustavus	A	---	---	---	---	---	---	---	---
Geikie	B	---	---	---	---	---	---	---	---
20MT1:									
Bearisland	A	---	---	---	---	---	---	---	---
Kadachan	A	Jan-Dec	0.7	1.5	---	---	None	---	None
Rubble land.									
20MT2:									
Escures	A	---	---	---	---	---	---	---	---
Polkapenn	D	---	---	---	---	---	---	---	---
Nunatak	A	---	---	---	---	---	---	---	---

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20MT3:									
Polkapenn	D	---	---	---	---	---	---	---	---
Bearisland	A	---	---	---	---	---	---	---	---
Enigma	B	---	---	---	---	---	---	---	---
20MT4:									
Seclusion	D	---	---	---	---	---	---	---	---
Rock outcrop.									
20MT5:									
Rock outcrop.									
Seclusion	D	---	---	---	---	---	---	---	---
Skarn	C	---	---	---	---	---	---	---	---
20MT6:									
Bergbay	A	---	---	---	---	---	---	---	---
Boussole	D	Jan-Dec	0.4	0.5	---	---	None	---	None
Toyatte	D	Jan-Dec	0.3	0.4	---	---	None	---	None
20MT7:									
Foad	C	---	---	---	---	---	---	---	---
Abdallah	A	---	---	---	---	---	---	---	---
Justicecreek	D	---	---	---	---	---	---	---	---

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20MTC:									
Skarn	C	---	---	---	---	---	---	---	---
Polkapenn	D	---	---	---	---	---	---	---	---
Kadachan	A	Jan-Dec	0.7	1.5	---	---	None	---	None
20MTE:									
Wachusett	C	Jan-Dec	0.6	0.9	---	---	None	---	None
Maquinna	B	---	---	---	---	---	---	---	---
Boussole	D	Jan-Dec	0.4	0.5	---	---	None	---	None
20MTF:									
Wachusett	C	Jan-Dec	0.6	0.9	---	---	None	---	None
Maquinna	B	---	---	---	---	---	---	---	---
Enigma	B	---	---	---	---	---	---	---	---

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20OC1:									
Scidmore	A/D								
		May-Nov	0.5	1.5	---	---	None	---	None
Perouse, frequently ponded	A/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		April	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		May	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		November	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		December	0.1	1.5	---	---	---	---	None
20OD1:									
Gustavus	A								
		---	---	---	---	---	---	---	---
Lamplugh	C/D								
		Apr-Dec	0.2	>2.0	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20ODF:									
Glacierbay	C/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.1	1.5	---	---	---	---	None
		April	0.1	1.5	---	---	---	---	None
		May	0.0	1.5	0.0-0.1	Long (7 to 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.1	Long (7 to 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.1	Long (7 to 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.1	Long (7 to 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.1	Long (7 to 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.1	Long (7 to 30 days)	Frequent	---	None
		November	0.0	1.5	0.0-0.1	Long (7 to 30 days)	Frequent	---	None
		December	0.1	1.5	---	---	---	---	None
Geikie	B								
		---	---	---	---	---	---	---	---
20OP1:									
Fossil	A								
		---	---	---	---	---	---	---	---
Tyeen	A								
		---	---	---	---	---	---	---	---
Vivid	B/D								
		Jan-Dec	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Occasional	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20OP4:									
Kashoto	A/D								
		Apr-Sept	0.2	1.5	---	---	None	---	None
Annoksek	D								
		---	---	---	---	---	---	---	---
Bulky	B/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.1	1.5	---	---	---	---	None
		April	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		May	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		June	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		July	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		August	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		September	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		October	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		November	0.1	1.5	---	---	---	---	None
		December	0.1	1.5	---	---	---	---	None
20OP5:									
Fossil	A								
		---	---	---	---	---	---	---	---
Tyeen	A								
		---	---	---	---	---	---	---	---
Vivid	B/D								
		Jan-Dec	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Occasional	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20OP6:									
Bulky	B/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.1	1.5	---	---	---	---	None
		April	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		May	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		June	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		July	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		August	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		September	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		October	0.1	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		November	0.1	1.5	---	---	---	---	None
		December	0.1	1.5	---	---	---	---	None
Bertha	A								
		Apr-Oct	---	---	---	---	None	Brief (2 to 7 days)	Occasional

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20OP6:									
Icy	B/D								
		January	0.0	1.5	---	---	---	---	None
		April	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		May	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
20OPE:									
Tyeen	A								
		---	---	---	---	---	---	---	---
Shagcove	A/D								
		Apr-Sept	0.5	1.5	---	---	None	---	None
Puffin	A								
		May-Oct	0.7	1.5	---	---	None	Brief (2 to 7 days)	Frequent

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20OV1:									
Perouse, frequently ponded-	A/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		April	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		May	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		November	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		December	0.1	1.5	---	---	---	---	None
Perouse--------------------	A/D								
		Jan-Dec	0.1	1.5	---	---	None	---	None
20OW1:									
Perouse--------------------	A/D								
		Jan-Dec	0.1	1.5	---	---	None	---	None
Gustavus-------------------	A								
		---	---	---	---	---	---	---	---

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20OW1:									
Perouse, frequently ponded-	A/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		April	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		May	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		November	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		December	0.1	1.5	---	---	---	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20OWF:									
Fairweather	C/D								
		January	0.0	1.5	---	---	---	---	None
		February	0.0	1.5	---	---	---	---	None
		March	0.0	1.5	---	---	---	---	None
		April	0.0	1.5	---	---	---	---	None
		May	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		November	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		December	0.0	1.5	---	---	---	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20OWF:									
Icy	B/D								
		January	0.0	1.5	---	---	---	---	None
		April	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		May	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.3	Very long (more than 30 days)	Frequent	---	None
20PL1:									
Tyeen	A								
		---	---	---	---	---	---	---	---
Cenotaph	B/D								
		Jan-Dec	0.3	1.5	---	---	None	---	None
Fossil	A								
		---	---	---	---	---	---	---	---

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20PL2:									
Tyeen	A	---	---	---	---	---	---	---	---
Fossil	A	---	---	---	---	---	---	---	---
Fingers	A/D	Jan-Dec	0.4	1.5	---	---	None	---	None
20PL3:									
Kashoto	A/D	Apr-Sept	0.2	1.5	---	---	None	---	None
Annoksek	D	---	---	---	---	---	---	---	---
Ancon	A/D	Jan-Dec	0.5	1.0	---	---	None	---	None
20PL6:									
Tidalwave	B	May-Oct	0.8	1.5	---	---	None	---	None
Drybay	B	---	---	---	---	---	---	---	---
Puffin	A	May-Oct	0.7	1.5	---	---	None	Brief (2 to 7 days)	Frequent

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20PLD:									
Typic Cryaquents, sandy----	A/D								
		January	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Brief (2 to 7 days)	Occasional
		February	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Brief (2 to 7 days)	Occasional
		March	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Brief (2 to 7 days)	Occasional
		April	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Brief (2 to 7 days)	Occasional
		May	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Brief (2 to 7 days)	Occasional
		June	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	---	---
		July	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	---	---
		August	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	---	---
		September	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Brief (2 to 7 days)	Occasional
		October	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Brief (2 to 7 days)	Occasional
		November	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Brief (2 to 7 days)	Occasional
		December	0.0	1.5	0.0-0.3	Long (7 to 30 days)	Frequent	Brief (2 to 7 days)	Occasional

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20PLD:									
Typic Cryorthents, sandy, rarely flooded	B								
		January	---	---	---	---	None	---	Rare
		February	---	---	---	---	None	---	Rare
		March	---	---	---	---	None	---	Rare
		April	---	---	---	---	None	---	Rare
		May	---	---	---	---	None	---	Rare
		September	---	---	---	---	None	---	Rare
		October	---	---	---	---	None	---	Rare
		November	---	---	---	---	None	---	Rare
		December	---	---	---	---	None	---	Rare
20RW2:									
Riverwash	---								
		January	0.3	>2.0	---	---	None	---	---
		February	0.3	>2.0	---	---	None	---	---
		March	0.3	>2.0	---	---	None	---	---
		April	0.3	>2.0	---	---	None	---	---
		May	0.3	>2.0	---	---	None	---	---
		June	0.3	>2.0	---	---	None	---	---
		July	0.3	>2.0	---	---	None	Long (7 to 30 days)	Frequent
		August	0.3	>2.0	---	---	None	Long (7 to 30 days)	Frequent
		September	0.3	>2.0	---	---	None	Long (7 to 30 days)	Frequent
		October	0.3	>2.0	---	---	None	Long (7 to 30 days)	Frequent
		November	0.3	>2.0	---	---	None	Long (7 to 30 days)	Frequent
		December	0.3	>2.0	---	---	None	---	---
Oxyaquic Cryorthents, sandy or gravelly	A								
		Jan-Dec	1.0	1.5	---	---	None	---	Rare
20SC:									
Beaches.									
Typic Cryopsamments, rarely flooded	A								
		Jan-Dec	---	---	---	---	None	---	Rare

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20TE2:									
Tidalwave	B								
		May-Oct	0.8	1.5	---	---	None	---	None
Drybay	B								
		---	---	---	---	---	---	---	---
20TF1:									
Water, saline.									
Astrolable	C/D								
		Jan-Dec	0.0	1.5	---	---	None	Very brief (4 to 48 hours)	Very frequent
Murkbay	A								
		---	---	---	---	---	---	---	---
20TF3:									
Water, saline.									
Astrolable	C/D								
		Jan-Dec	0.0	1.5	---	---	None	Very brief (4 to 48 hours)	Very frequent
Beartrack	B/D								
		Jan-Dec	0.0	1.5	---	---	None	Very brief (4 to 48 hours)	Frequent
20TH1:									
Ibach	C								
		---	---	---	---	---	---	---	---
Lamplugh	C/D								
		Apr-Dec	0.2	>2.0	---	---	None	---	None
Bartlettcove	A								
		---	---	---	---	---	---	---	---
20UL1.									
Urban land									
20UM1:									
Rock outcrop.									
Bearisland	A								
		---	---	---	---	---	---	---	---

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20UM2:									
Rock outcrop.									
Bearisland	A	---	---	---	---	---	---	---	---
20VBA:									
Typic Cryofluvents	A	Jan-Dec	---	---	---	---	None	Brief (2 to 7 days)	Occasional
Aquic Dystrocryepts, silty	B/D	January	0.5	1.5	0.0-0.3	Brief (2 to 7 days)	Occasional	Brief (2 to 7 days)	Occasional
		February	0.5	1.5	0.0-0.3	Brief (2 to 7 days)	Occasional	Brief (2 to 7 days)	Occasional
		March	0.5	1.5	0.0-0.3	Brief (2 to 7 days)	Occasional	Brief (2 to 7 days)	Occasional
		April	0.5	1.5	0.0-0.3	Brief (2 to 7 days)	Occasional	Brief (2 to 7 days)	Occasional
		May	0.5	1.5	0.0-0.3	Brief (2 to 7 days)	Occasional	Brief (2 to 7 days)	Occasional
		June	0.5	1.5	---	---	---	---	---
		July	0.5	1.5	---	---	---	---	---
		August	0.5	1.5	---	---	---	---	---
		September	0.5	1.5	0.0-0.3	Brief (2 to 7 days)	Occasional	Brief (2 to 7 days)	Occasional
		October	0.5	1.5	0.0-0.3	Brief (2 to 7 days)	Occasional	Brief (2 to 7 days)	Occasional
		November	0.5	1.5	0.0-0.3	Brief (2 to 7 days)	Occasional	Brief (2 to 7 days)	Occasional
		December	0.5	1.5	0.0-0.3	Brief (2 to 7 days)	Occasional	Brief (2 to 7 days)	Occasional
20WD1:									
Perouse	A/D	Jan-Dec	0.1	1.5	---	---	None	---	None
Scidmore	A/D	May-Nov	0.5	1.5	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
20WD1:									
Perouse, frequently ponded	A/D								
		January	0.1	1.5	---	---	---	---	None
		February	0.1	1.5	---	---	---	---	None
		March	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		April	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		May	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		June	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		July	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		August	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		September	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		October	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		November	0.0	1.5	0.0-0.2	Long (7 to 30 days)	Frequent	---	None
		December	0.1	1.5	---	---	---	---	None
22HIA:									
Rock outcrop, rugged summut.									
Lithic Cryorthents, rugged summit	C/D								
		Oct-Nov	0.3	0.4	---	---	None	---	None
22SM1:									
Woodlake	B								
		---	---	---	---	---	---	---	---
Flapjack	C/D								
		Jan-Dec	0.5	0.6	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			m	m	m				
BR. Rock outcrop									
GL2. Glaciers									
P. Pits									
RW: Riverwash	---								
		January	0.3	1.5	---	---	None	---	---
		February	0.3	1.5	---	---	None	---	---
		March	0.3	1.5	---	---	None	---	---
		April	0.3	1.5	---	---	None	---	---
		May	0.3	1.5	---	---	None	Brief (2 to 7 days)	Frequent
		June	0.3	1.5	---	---	None	Brief (2 to 7 days)	Frequent
		July	0.3	1.5	---	---	None	Brief (2 to 7 days)	Frequent
		August	0.3	1.5	---	---	None	Brief (2 to 7 days)	Frequent
		September	0.3	1.5	---	---	None	Brief (2 to 7 days)	Frequent
		October	0.3	1.5	---	---	None	Brief (2 to 7 days)	Frequent
		November	0.3	1.5	---	---	None	---	---
		December	0.3	1.5	---	---	None	---	---
SW. Water, saline									
W. Water									

Table 20.—Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that data were not estimated)

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20AF1:							
Muirpoint	No restriction	---	---	---	Low	Low	Low
Puffin	No restriction	---	---	---	Low	Low	Low
Bertha	No restriction	---	---	---	Low	Low	Moderate
Riverwash.							
20AF2:							
Entisols, alluvial fans, occasionally flooded	No restriction	---	---	---	Low	High	Moderate
Cryods, alluvial fans	No restriction	---	---	---	Moderate	High	High
20CL1:							
Strawberry	No restriction	---	---	---	Moderate	High	Moderate
Fingerock	No restriction	---	---	---	Low	Moderate	Moderate
Beartrack	No restriction	---	---	---	High	Moderate	Moderate
Murkbay	No restriction	---	---	---	Low	Moderate	Moderate
20CP1:							
Oberlin	No restriction	---	---	---	Moderate	High	Moderate
Perouse, frequently ponded	No restriction	---	---	---	Moderate	High	Low
Perouse	No restriction	---	---	---	Moderate	High	Low
Scidmore	No restriction	---	---	---	Low	High	Low
20CP2:							
Beaches.							
Monashka	No restriction	---	---	---	Moderate	High	Moderate
Murkbay	No restriction	---	---	---	Low	Moderate	Moderate

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20CPF:							
Icy	No restriction	---	---	---	High	High	Low
Excursion	No restriction	---	---	---	High	High	Low
Strawberry	No restriction	---	---	---	Moderate	High	Moderate
Astrolable	No restriction	---	---	---	Moderate	Moderate	Low
20ED1:							
Gustavus	No restriction	---	---	---	Low	Low	Moderate
Bartlettcove	No restriction	---	---	---	Low	Moderate	High
Scidmore	No restriction	---	---	---	Low	High	Low
20ED2:							
Beardslee	No restriction	---	---	---	Low	Low	Moderate
Monashka	No restriction	---	---	---	Moderate	High	Moderate
20FP1:							
Drybay	No restriction	---	---	---	Low	Low	Moderate
Tidalwave	No restriction	---	---	---	Low	Low	Moderate
20FP2:							
Bertha	No restriction	---	---	---	Low	Low	Moderate
Puffin	No restriction	---	---	---	Low	Low	Low
Riverwash.							
Water, saline.							
20FP3:							
Tidalwave	No restriction	---	---	---	Low	Low	Moderate
Ashmun, frequently ponded	No restriction	---	---	---	Moderate	Moderate	Low
Drybay	No restriction	---	---	---	Low	Low	Moderate
20FPL:							
Cryaquepts	No restriction	---	---	---	Moderate	Moderate	Moderate
Typic Cryaquents, gravelly, very poorly drained	No restriction	---	---	---	Moderate	High	Moderate
Water.							

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20FPM:							
Typic Cryaquents, silty	No restriction	---	---	---	High	High	Moderate
Aquic Cryorthents, sandy	No restriction	---	---	---	Low	Moderate	High
Water.							
20FPY:							
Oxyaquic Cryorthents, sandy or gravelly	No restriction	---	---	---	Low	Moderate	Moderate
Typic Cryaquents, sandy or gravelly	No restriction	---	---	---	High	Moderate	High
Typic Cryopsamments, rarely flooded	No restriction	---	---	---	Low	Low	Moderate
Water.							
20FPZ:							
Typic Cryorthents, gravelly	No restriction	---	---	---	Low	Moderate	High
Typic Cryofluvents	No restriction	---	---	---	Low	Moderate	High
Typic Haplocryods, sandy or gravelly	No restriction	---	---	---	Low	Moderate	High
20GP1:							
Gustavus	No restriction	---	---	---	Low	Low	Moderate
Ibach	No restriction	---	---	---	Moderate	High	High
Scidmore	No restriction	---	---	---	Low	High	Low
Water, nonsaline.							
20HI1:							
Foad	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Boussole	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Kashoto	No restriction	---	---	---	High	High	High
Rock outcrop.							

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20HI2:							
Kashoto	No restriction	---	---	---	High	High	High
Foad	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Kutskloh	No restriction	---	---	---	Moderate	High	Moderate
Boussole	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Charpentier	Lithic bedrock	50-100	100-150	Indurated	High	High	High
20HI3:							
Polkapenn	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Moderate
Dagelet	Lithic bedrock	50-100	100-150	Indurated	Moderate	Low	Moderate
Nunatak	Lithic bedrock	100-150	50-100	Indurated	Moderate	Low	Moderate
Rock outcrop.							
Seclusion	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Low
20HI5:							
Kaknau	Paralithic bedrock	50-100	100-150	Moderately cemented	Moderate	Low	Moderate
Tricklake	No restriction	---	---	---	Moderate	Low	Low
Crillon	Paralithic bedrock Lithic bedrock	50-70 70-90	20-40 110-130	Moderately cemented Indurated	Moderate	High	Moderate
Grandplateau	Lithic bedrock	100-150	50-100	Indurated	High	High	Moderate
20HIB:							
Drybay	No restriction	---	---	---	Low	Low	Moderate
Kaknau	Paralithic bedrock	50-100	100-150	Moderately cemented	Moderate	Low	Moderate
Vivid	No restriction	---	---	---	High	Moderate	Low
Water, nonsaline.							

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20HID:							
Grandplateau	Lithic bedrock	100-150	50-100	Indurated	High	High	Moderate
Crillon	Paralithic bedrock	50-70	20-40	Moderately cemented	Moderate	High	Moderate
	Lithic bedrock	70-90	110-130	Indurated			
Kaknau	Paralithic bedrock	50-100	100-150	Moderately cemented	Moderate	Low	Moderate
20HIE:							
Kashoto	No restriction	---	---	---	High	High	High
Kutskloh	No restriction	---	---	---	Moderate	High	Moderate
Wachusett	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Maquinna	Lithic bedrock	100-150	50-100	Indurated	Moderate	High	High
20HIF:							
Kashoto	No restriction	---	---	---	High	High	High
Wachusett	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Kutskloh	No restriction	---	---	---	Moderate	High	Moderate
Maquinna	Lithic bedrock	100-150	50-100	Indurated	Moderate	High	High
20HIN:							
Polkapenn	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Moderate
Nunatak	Lithic bedrock	100-150	50-100	Indurated	Moderate	Low	Moderate
Escures	Lithic bedrock	50-100	100-150	Indurated	Moderate	Low	Moderate
Rock outcrop.							
Tyeen	No restriction	---	---	---	Moderate	Low	Low
20HIS:							
Lithic Cryorthents, rugged summit	Lithic bedrock	20-51	149-180	Indurated	Moderate	High	Moderate
Typic Humicryepts, high elevation	No restriction	---	---	---	Moderate	High	High
Typic Haplocryods, loamy, high elevation	Paralithic bedrock	25-103	---	Moderately cemented	Moderate	High	High

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20IS1:							
Cenotaph	No restriction	---	---	---	High	Moderate	Low
Water, saline.							
Beaches.							
Lituya	No restriction	---	---	---	Low	Low	Low
20LF1:							
Abyss	No restriction	---	---	---	Moderate	Moderate	Low
Astrolable	No restriction	---	---	---	Moderate	Moderate	Low
Scidmore	No restriction	---	---	---	Low	High	Low
Riverwash.							
20MD1:							
Gustavus	No restriction	---	---	---	Low	Low	Moderate
Perouse	No restriction	---	---	---	Moderate	High	Low
Scidmore	No restriction	---	---	---	Low	High	Low
20MF1:							
Geikie	No restriction	---	---	---	Moderate	High	High
Gustavus	No restriction	---	---	---	Low	Low	Moderate
Scidmore	No restriction	---	---	---	Low	High	Low
20MF2:							
Gustavus	No restriction	---	---	---	Low	Low	Moderate
Geikie	No restriction	---	---	---	Moderate	High	High
Scidmore, drained	No restriction	---	---	---	Low	High	Low
20MT1:							
Bearisland	No restriction	---	---	---	Low	Low	Low
Kadachan	No restriction	---	---	---	Moderate	Low	Moderate
Rubble land.							
Seclusion	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Low

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20MT2:							
Escures	Lithic bedrock	50-100	100-150	Indurated	Moderate	Low	Moderate
Polkapenn	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Moderate
Nunatak	Lithic bedrock	100-150	50-100	Indurated	Moderate	Low	Moderate
Bearisland	No restriction	---	---	---	Low	Low	Low
Kadachan	No restriction	---	---	---	Moderate	Low	Moderate
Rock outcrop.							
Rubble land.							
20MT3:							
Polkapenn	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Moderate
Bearisland	No restriction	---	---	---	Low	Low	Low
Enigma	Lithic bedrock	50-100	100-150	Indurated	Moderate	Low	Low
Rock outcrop.							
Seclusion	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Low
Rubble land.							
20MT4:							
Seclusion	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Low
Rock outcrop.							
Skarn	Lithic bedrock	100-150	50-100	Indurated	Moderate	Moderate	Moderate
20MT5:							
Rock outcrop.							
Seclusion	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Low
Skarn	Lithic bedrock	100-150	50-100	Indurated	Moderate	Moderate	Moderate
Kadachan	No restriction	---	---	---	Moderate	Low	Moderate
Muirpoint	No restriction	---	---	---	Low	Low	Low

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20MT6:							
Bergbay	Lithic bedrock	50-100	100-150	Indurated	Moderate	Moderate	High
Boussole	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Toyatte	Lithic bedrock	25-50	150-175	Indurated	High	High	High
Fingers	No restriction	---	---	---	Low	Moderate	Low
Kashoto	No restriction	---	---	---	High	High	High
Abdallah	No restriction	---	---	---	Moderate	Moderate	High
20MT7:							
Foad	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Abdallah	No restriction	---	---	---	Moderate	Moderate	High
Justicecreek	Lithic bedrock	0-25	175-200	Indurated	High	High	High
Kutskloh	No restriction	---	---	---	Moderate	High	Moderate
Rubble land.							
20MTC:							
Skarn	Lithic bedrock	100-150	50-100	Indurated	Moderate	Moderate	Moderate
Polkapenn	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Moderate
Kadachan	No restriction	---	---	---	Moderate	Low	Moderate
Enigma	Lithic bedrock	50-100	100-150	Indurated	Moderate	Low	Low
Rock outcrop.							
20MTE:							
Wachusett	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Maquinna	Lithic bedrock	100-150	50-100	Indurated	Moderate	High	High
Boussole	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Fingers	No restriction	---	---	---	Low	Moderate	Low

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20MTF:							
Wachusett	Lithic bedrock	50-100	100-150	Indurated	Moderate	High	High
Maquinna	Lithic bedrock	100-150	50-100	Indurated	Moderate	High	High
Enigma	Lithic bedrock	50-100	100-150	Indurated	Moderate	Low	Low
Escures	Lithic bedrock	50-100	100-150	Indurated	Moderate	Low	Moderate
Fingers	No restriction	---	---	---	Low	Moderate	Low
20OC1:							
Scidmore	No restriction	---	---	---	Low	High	Low
Perouse, frequently ponded	No restriction	---	---	---	Moderate	High	Low
Scidmore, drained	No restriction	---	---	---	Low	High	Low
20OD1:							
Gustavus	No restriction	---	---	---	Low	Low	Moderate
Lamplugh	No restriction	---	---	---	High	High	High
Perouse, frequently ponded	No restriction	---	---	---	Moderate	High	Low
20ODF:							
Glacierbay	No restriction	---	---	---	High	High	Moderate
Geikie	No restriction	---	---	---	Moderate	High	High
Excursion	No restriction	---	---	---	High	High	Low
Topsy	No restriction	---	---	---	Moderate	Moderate	Moderate
20OP1:							
Fossil	No restriction	---	---	---	Low	Low	Low
Tyeen	No restriction	---	---	---	Moderate	Low	Low
Vivid	No restriction	---	---	---	High	Moderate	Low
Fingers	No restriction	---	---	---	Low	Moderate	Low
Riverwash.							
Lituya	No restriction	---	---	---	Low	Low	Low

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20OP4:							
Kashoto	No restriction	---	---	---	High	High	High
Annoksek	Lithic bedrock	25-50	150-175	Indurated	High	Low	High
Bulky	No restriction	---	---	---	Moderate	Moderate	High
Murkbay	No restriction	---	---	---	Low	Moderate	Moderate
20OP5:							
Fossil	No restriction	---	---	---	Low	Low	Low
Tyeen	No restriction	---	---	---	Moderate	Low	Low
Vivid	No restriction	---	---	---	High	Moderate	Low
Puffin	No restriction	---	---	---	Low	Low	Low
Riverwash.							
20OP6:							
Bulky	No restriction	---	---	---	Moderate	Moderate	High
Bertha	No restriction	---	---	---	Low	Low	Moderate
Icy	No restriction	---	---	---	High	High	Low
Puffin	No restriction	---	---	---	Low	Low	Low
Riverwash.							
20OPE:							
Tyeen	No restriction	---	---	---	Moderate	Low	Low
Shagcove	No restriction	---	---	---	Low	High	Low
Puffin	No restriction	---	---	---	Low	Low	Low
Riverwash.							
20OV1:							
Perouse, frequently ponded	No restriction	---	---	---	Moderate	High	Low
Perouse	No restriction	---	---	---	Moderate	High	Low

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20OW1:							
Perouse	No restriction	---	---	---	Moderate	High	Low
Gustavus	No restriction	---	---	---	Low	Low	Moderate
Perouse, frequently ponded	No restriction	---	---	---	Moderate	High	Low
Scidmore, drained	No restriction	---	---	---	Low	High	Low
20OWF:							
Fairweather	No restriction	---	---	---	High	High	Moderate
Icy	No restriction	---	---	---	High	High	Low
20PL1:							
Tyeen	No restriction	---	---	---	Moderate	Low	Low
Cenotaph	No restriction	---	---	---	High	Moderate	Low
Fossil	No restriction	---	---	---	Low	Low	Low
Lituya	No restriction	---	---	---	Low	Low	Low
Water, nonsaline.							
20PL2:							
Tyeen	No restriction	---	---	---	Moderate	Low	Low
Fossil	No restriction	---	---	---	Low	Low	Low
Fingers	No restriction	---	---	---	Low	Moderate	Low
Vivid	No restriction	---	---	---	High	Moderate	Low
Water, nonsaline.							
20PL3:							
Kashoto	No restriction	---	---	---	High	High	High
Annoksek	Lithic bedrock	25-50	150-175	Indurated	High	Low	High
Ancon	Lithic bedrock	100-150	50-100	Indurated	Moderate	High	High
Fingers	No restriction	---	---	---	Low	Moderate	Low
Water, nonsaline.							

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20PL6:							
Tidalwave	No restriction	---	---	---	Low	Low	Moderate
Drybay	No restriction	---	---	---	Low	Low	Moderate
Puffin	No restriction	---	---	---	Low	Low	Low
20PLD:							
Typic Cryaquents, sandy	No restriction	---	---	---	Moderate	High	High
Typic Cryorthents, sandy, rarely flooded	No restriction	---	---	---	Low	Moderate	Moderate
Oxyaquic Cryopsamments	No restriction	---	---	---	Low	Moderate	Moderate
Typic Cryopsamments	No restriction	---	---	---	Low	Low	Moderate
20RW2:							
Riverwash.							
Oxyaquic Cryorthents, sandy or gravelly	No restriction	---	---	---	Low	Moderate	Moderate
Water.							
Typic Cryaquents, gravelly, frequently flooded	No restriction	---	---	---	Moderate	High	Moderate
20SC:							
Beaches.							
Typic Cryopsamments, rarely flooded	No restriction	---	---	---	Low	Low	Moderate
Water, saline.							
20TE2:							
Tidalwave	No restriction	---	---	---	Low	Low	Moderate
Drybay	No restriction	---	---	---	Low	Low	Moderate
Ashmun, frequently ponded	No restriction	---	---	---	Moderate	Moderate	Low
Puffin	No restriction	---	---	---	Low	Low	Low

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20TF1: Water, saline.							
Astrolable	No restriction	---	---	---	Moderate	Moderate	Low
Murkbay	No restriction	---	---	---	Low	Moderate	Moderate
20TF3: Water, saline.							
Astrolable	No restriction	---	---	---	Moderate	Moderate	Low
Beartrack	No restriction	---	---	---	High	Moderate	Moderate
Lituya	No restriction	---	---	---	Low	Low	Low
20TH1:							
Ibach	No restriction	---	---	---	Moderate	High	High
Lamplugh	No restriction	---	---	---	High	High	High
Bartlettcove	No restriction	---	---	---	Low	Moderate	High
Gustavus	No restriction	---	---	---	Low	Low	Moderate
20UL1: Urban land.							
Scidmore, drained	No restriction	---	---	---	Low	High	Low
20UM1: Rock outcrop.							
Bearisland	No restriction	---	---	---	Low	Low	Low
Skarn	Lithic bedrock	100-150	50-100	Indurated	Moderate	Moderate	Moderate
Seclusion	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Low
20UM2: Rock outcrop.							
Bearisland	No restriction	---	---	---	Low	Low	Low
Skarn	Lithic bedrock	100-150	50-100	Indurated	Moderate	Moderate	Moderate
Seclusion	Lithic bedrock	25-50	150-175	Indurated	Moderate	Low	Low

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
20VBA:							
Typic Cryofluvents	No restriction	---	---	---	Low	Moderate	High
Aquic Dystrocryepts, silty	No restriction	---	---	---	Moderate	High	Moderate
Typic Cryaquents, gravelly	No restriction	---	---	---	Moderate	High	Moderate
Typic Haplocryods, sandy	No restriction	---	---	---	Low	Low	Moderate
20WD1:							
Perouse	No restriction	---	---	---	Moderate	High	Low
Scidmore	No restriction	---	---	---	Low	High	Low
Perouse, frequently ponded	No restriction	---	---	---	Moderate	High	Low
Gustavus	No restriction	---	---	---	Low	Low	Moderate
22HIA:							
Rock outcrop, rugged summit.							
Lithic Cryorthents, rugged summit	Lithic bedrock	20-51	149-180	Indurated	Moderate	High	Moderate
Lithic Cryosaprists, rugged summit	Lithic bedrock	30-102	98-170	Indurated	High	High	High
22SM1:							
Woodlake	Lithic bedrock	50-100	100-150	Indurated	Moderate	Moderate	High
Flapjack	Lithic bedrock	50-100	100-150	Indurated	Moderate	Moderate	High
Rock outcrop.							
BR.							
Rock outcrop.							
GL2:							
Glaciers.							
Rock outcrop.							
P:							
Pits.							
Water, nonsaline.							

Table 20.—Soil Features—Continued

Map unit symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		cm	cm				
RW:							
Riverwash.							
Water, nonsaline.							
SW:							
Water, saline.							
Rock outcrop.							
W.							
Water							

Table 21.—Taxonomic Classification of the Soils

Soil name	Family or higher taxonomic class
Abdallah	Loamy-skeletal, mixed, superactive, acid Typic Cryorthents
Abyss	Sandy, mixed Typic Cryaquents
Ancon	Coarse-loamy, mixed, superactive Aquic Haplocryods
Annoksek	Loamy, mixed, superactive, acid Lithic Cryorthents
Aquic Dystrocryepts	Aquic Dystrocryepts
Ashmun	Sandy, mixed Typic Cryaquents
Astrolable	Sandy-skeletal, mixed Typic Cryaquents
Bartlettcove	Sandy, mixed Entic Haplocryods
Beardslee	Mixed Typic Cryopsamments
Bearisland	Sandy-skeletal, mixed Typic Cryorthents
Beartrack	Coarse-silty, mixed, superactive, calcareous Typic Cryaquents
Bergbay	Loamy-skeletal, mixed, superactive Typic Humicryepts
Bertha	Sandy, mixed Typic Cryofluvents
Boussole	Loamy, mixed, superactive Lithic Humicryepts
Bulky	Sandy, mixed Typic Cryaquepts
Cenotaph	Coarse-loamy, mixed, superactive, calcareous Typic Cryaquents
Crillon	Coarse-loamy, mixed, superactive, nonacid Oxyaquic Cryorthents
Cryaquepts	Cryaquepts
Dagelet	Loamy-skeletal, mixed, superactive, nonacid Typic Cryorthents
Drybay	Sandy-skeletal, mixed Typic Cryorthents
Enigma	Loamy-skeletal, mixed, superactive, nonacid Typic Cryorthents
Entisols	Entisols
Escures	Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents
Excursion	Coarse-loamy, mixed, superactive, nonacid Typic Cryaquents
Fairweather	Loamy over sandy or sandy-skeletal, mixed, superactive, calcareous Typic Cryaquents
Fingerock	Mixed Oxyaquic Cryopsamments
Fingers	Sandy-skeletal, mixed Oxyaquic Cryorthents
Flapjack	Loamy-skeletal, mixed, superactive, acid, subgelic Oxyaquic Gelorthents
Foad	Loamy-skeletal, mixed, superactive Typic Humicryods
Fossil	Sandy, mixed Typic Cryorthents
Geikie	Coarse-loamy over sandy or sandy-skeletal, mixed, superactive Typic Haplocryepts
Glacierbay	Fine-silty over sandy or sandy-skeletal, mixed, superactive, calcareous Typic Cryaquents
Grandplateau	Medial, amorphic, nonacid Typic Cryaquands
Gustavus	Sandy, mixed Typic Haplocryepts
Ibach	Loamy-skeletal, mixed, superactive Typic Humicryepts
Icy	Fine-silty, mixed, superactive, calcareous Typic Cryaquents
Justicecreek	Dysic Lithic Cryofolists
Kadachan	Sandy-skeletal, mixed Oxyaquic Cryofluvents
Kaknau	Coarse-loamy, mixed, superactive Typic Haplocryepts
Kashoto	Dysic Typic Cryosaprists
Kutskloh	Loamy-skeletal, mixed, superactive Oxyaquic Humicryepts
Lamplugh	Fine-loamy, mixed, superactive, nonacid Typic Cryaquepts
Lithic Cryorthents	Lithic Cryorthents
Maquinna	Coarse-loamy, mixed, superactive Typic Humicryepts
Monashka	Sandy, mixed Typic Cryaquents
Muirpoint	Sandy-skeletal, mixed Typic Cryorthents
Murkbay	Mixed Typic Cryopsamments
Nunatak	Loamy-skeletal, mixed, superactive Typic Haplocryepts
Oberlin	Sandy, mixed Typic Cryaquepts
Oxyaquic Cryorthents	Oxyaquic Cryorthents
Perouse	Sandy, mixed Typic Cryaquents
Polkapenn	Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents
Puffin	Sandy-skeletal, mixed Oxyaquic Cryorthents
Scidmore	Sandy, mixed Aquic Haplocryepts
Seclusion	Loamy-skeletal, mixed, superactive, calcareous Lithic Cryorthents
Shagcove	Sandy-skeletal, mixed Aquic Cryorthents
Skarn	Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents
Strawberry	Coarse-loamy, mixed, superactive, calcareous Aquic Cryorthents
Tidalwave	Sandy, mixed Oxyaquic Cryorthents

Table 21.—Taxonomic Classification of the Soils—Continued

Soil name	Family or higher taxonomic class
Toyatte	Dysic Lithic Cryofolists
Tricklake	Coarse-loamy, mixed, superactive Typic Haplocryolls
Tyeen	Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents
Typic Cryaquents	Typic Cryaquents
Typic Cryofluvents	Typic Cryofluvents
Typic Cryopsamments	Typic Cryopsamments
Typic Cryorthents	Typic Cryorthents
Typic Humicryepts	Typic Humicryepts
Vivid	Loamy-skeletal, mixed, superactive, calcareous Typic Cryaquents
Wachusett	Coarse-loamy, mixed, superactive Folistic Humicryods
Woodlake	Loamy-skeletal, mixed, superactive, acid, subgelic Typic Gelorthents

Table 22.—Soil Classification Key

ORDER
   Suborder
      Great Group
         Subgroup
            Series or Higher Category

ANDISOLS
   Aquands
      Cryaquands
         Typic Cryaquands
            Grandplateau------------------Medial, amorphic, nonacid Typic Cryaquands

ENTISOLS

   Aquents
      Cryaquents
         Typic Cryaquents
            Cenotaph----------------------Coarse-loamy, mixed, superactive, calcareous Typic Cryaquents
            Excursion---------------------Coarse-loamy, mixed, superactive, nonacid Typic Cryaquents
            Beartrack---------------------Coarse-silty, mixed, superactive, calcareous Typic Cryaquents
            Glacierbay--------------------Fine-silty over sandy or sandy-skeletal, mixed, superactive, calcareous Typic Cryaquents
            Icy---------------------------Fine-silty, mixed, superactive, calcareous Typic Cryaquents
            Fairweather-------------------Loamy over sandy or sandy-skeletal, mixed, superactive, calcareous Typic Cryaquents
            Vivid-------------------------Loamy-skeletal, mixed, superactive, calcareous Typic Cryaquents
            Abyss-------------------------Sandy, mixed Typic Cryaquents
            Ashmun------------------------Sandy, mixed Typic Cryaquents
            Monashka----------------------Sandy, mixed Typic Cryaquents
            Perouse-----------------------Sandy, mixed Typic Cryaquents
            Topsy-------------------------Sandy, mixed Typic Cryaquents
            Astrolable--------------------Sandy-skeletal, mixed Typic Cryaquents
   Fluvents
      Cryofluvents
         Typic Cryofluvents
            Bertha------------------------Sandy, mixed Typic Cryofluvents
         Oxyaquic Cryofluvents
            Kadachan----------------------Sandy-skeletal, mixed Oxyaquic Cryofluvents
   Orthents
      Cryorthents
         Typic Cryorthents
            Abdallah----------------------Loamy-skeletal, mixed, superactive, acid Typic Cryorthents
            Skarn-------------------------Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents
            Tyeen-------------------------Loamy-skeletal, mixed, superactive, calcareous Typic Cryorthents
            Dagelet-----------------------Loamy-skeletal, mixed, superactive, nonacid Typic Cryorthents
            Enigma------------------------Loamy-skeletal, mixed, superactive, nonacid Typic Cryorthents
            Fossil------------------------Sandy, mixed Typic Cryorthents
            Bearisland--------------------Sandy-skeletal, mixed Typic Cryorthents
            Drybay------------------------Sandy-skeletal, mixed Typic Cryorthents
            Lituya------------------------Sandy-skeletal, mixed Typic Cryorthents
            Muirpoint---------------------Sandy-skeletal, mixed Typic Cryorthents
         Aquic Cryorthents
            Strawberry--------------------Coarse-loamy, mixed, superactive, calcareous Aquic Cryorthents
            Shagcove----------------------Sandy-skeletal, mixed Aquic Cryorthents
         Lithic Cryorthents
            Annoksek----------------------Loamy, mixed, superactive, acid Lithic Cryorthents
            Seclusion---------------------Loamy-skeletal, mixed, superactive, calcareous Lithic Cryorthents
            Escures-----------------------Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents
            Polkapenn---------------------Loamy-skeletal, mixed, superactive, nonacid Lithic Cryorthents
         Oxyaquic Cryorthents
            Crillon-----------------------Coarse-loamy, mixed, superactive, nonacid Oxyaquic Cryorthents
            Tidalwave---------------------Sandy, mixed Oxyaquic Cryorthents
            Fingers-----------------------Sandy-skeletal, mixed Oxyaquic Cryorthents
            Puffin------------------------Sandy-skeletal, mixed Oxyaquic Cryorthents

Table 22.—Soil Classification Key—Continued

- **ORDER**
  - **Suborder**
    - **Great Group**
      - **Subgroup**
        - **Series or Higher Category**

ENTISOLS—Continued

- **Orthents**
  - **Gelorthents**
    - **Typic Gelorthents**
      - **Woodlake----------------------Loamy-skeletal, mixed, superactive, acid, subgelic Typic Gelorthents**
    - **Oxyaquic Gelorthents**
      - **Flapjack----------------------Loamy-skeletal, mixed, superactive, acid, subgelic Oxyaquic Gelorthents**
- **Psamments**
  - **Cryopsamments**
    - **Typic Cryopsamments**
      - **Beardslee---------------------Mixed Typic Cryopsamments**
      - **Murkbay-----------------------Mixed Typic Cryopsamments**
    - **Oxyaquic Cryopsamments**
      - **Fingerock---------------------Mixed Oxyaquic Cryopsamments**

HISTOSOLS

- **Hemists**
  - **Cryohemists**
    - **Lithic Cryohemists**
      - **Charpentier-------------------Dysic Lithic Cryohemists**
- **Folists**
  - **Cryofolists**
    - **Lithic Cryofolists**
      - **Justicecreek------------------Dysic Lithic Cryofolists**
      - **Toyatte-----------------------Dysic Lithic Cryofolists**
- **Saprists**
  - **Cryosaprists**
    - **Typic Cryosaprists**
      - **Kashoto-----------------------Dysic Typic Cryosaprists**
    - **Lithic Cryosaprists**

INCEPTISOLS

- **Aquepts**
  - **Cryaquepts**
    - **Typic Cryaquepts**
      - **Lamplugh----------------------Fine-loamy, mixed, superactive, nonacid Typic Cryaquepts**
      - **Bulky-------------------------Sandy, mixed Typic Cryaquepts**
      - **Oberlin-----------------------Sandy, mixed Typic Cryaquepts**
- **Cryepts**
  - **Dystrocryepts**
    - **Aquic Dystrocryepts**
  - **Humicryepts**
    - **Lithic Humicryepts**
      - **Boussole----------------------Loamy, mixed, superactive Lithic Humicryepts**
    - **Oxyaquic Humicryepts**
      - **Kutskloh----------------------Loamy-skeletal, mixed, superactive Oxyaquic Humicryepts**
    - **Typic Humicryepts**
      - **Maquinna----------------------Coarse-loamy, mixed, superactive Typic Humicryepts**
      - **Bergbay-----------------------Loamy-skeletal, mixed, superactive Typic Humicryepts**
      - **Ibach-------------------------Loamy-skeletal, mixed, superactive Typic Humicryepts**
  - **Haplocryepts**
    - **Aquic Haplocryepts**
      - **Scidmore----------------------Sandy, mixed Aquic Haplocryepts**
    - **Typic Haplocryepts**
      - **Geikie------------------------Coarse-loamy over sandy or sandy-skeletal, mixed, superactive Typic Haplocryepts**
      - **Kaknau------------------------Coarse-loamy, mixed, superactive Typic Haplocryepts**
      - **Nunatak-----------------------Loamy-skeletal, mixed, superactive Typic Haplocryepts**
      - **Gustavus----------------------Sandy, mixed Typic Haplocryepts**

Table 22.—Soil Classification Key—Continued

- ORDER
  - Suborder
    - Great Group
      - Subgroup
        - Series or Higher Category

- MOLLISOLS
  - Cryolls
    - Haplocryolls
      - Typic Haplocryolls
        - Tricklake---------------------Coarse-loamy, mixed, superactive Typic Haplocryolls

- SPODOSOLS
  - Cryods
    - Haplocryods
      - Typic Haplocryods
      - Aquic Haplocryods
        - Ancon-------------------------Coarse-loamy, mixed, superactive Aquic Haplocryods
      - Entic Haplocryods
        - Bartlettcove------------------Sandy, mixed Entic Haplocryods
    - Humicryods
      - Typic Humicryods
        - Foad--------------------------Loamy-skeletal, mixed, superactive Typic Humicryods
      - Folistic Humicryods
        - Wachusett---------------------Coarse-loamy, mixed, superactive Folistic Humicryods

Appendix—Locator Maps for Detailed Soil Map Units

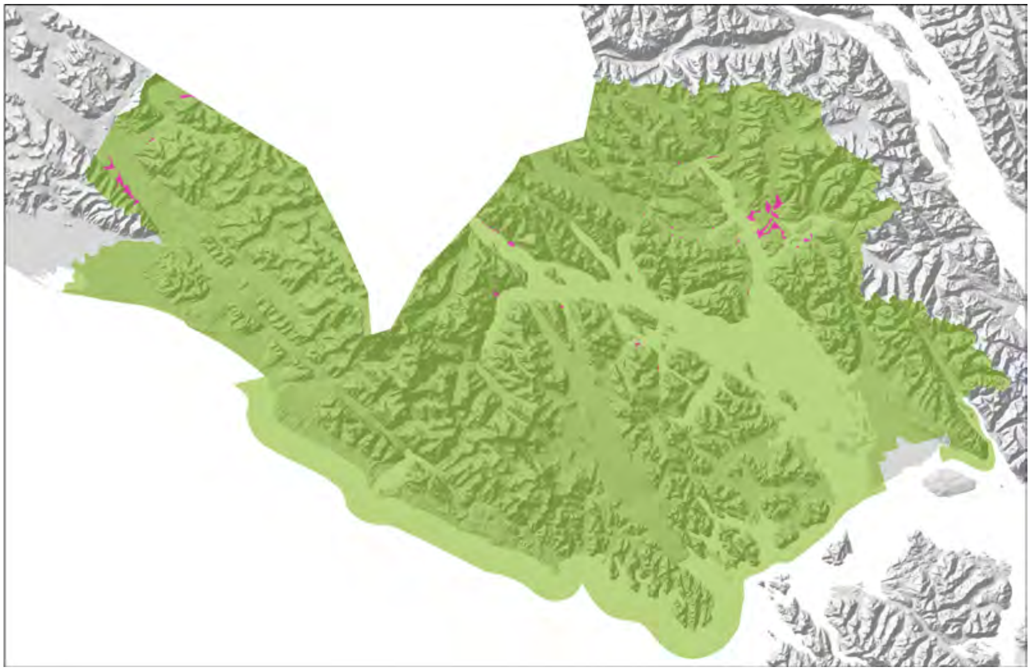

Figure A1: Location of areas (in bright pink) mapped as 20AF1—Muirpoint-Puffin complex, 5 to 20 percent slopes, in Glacier Bay National Park and Preserve.

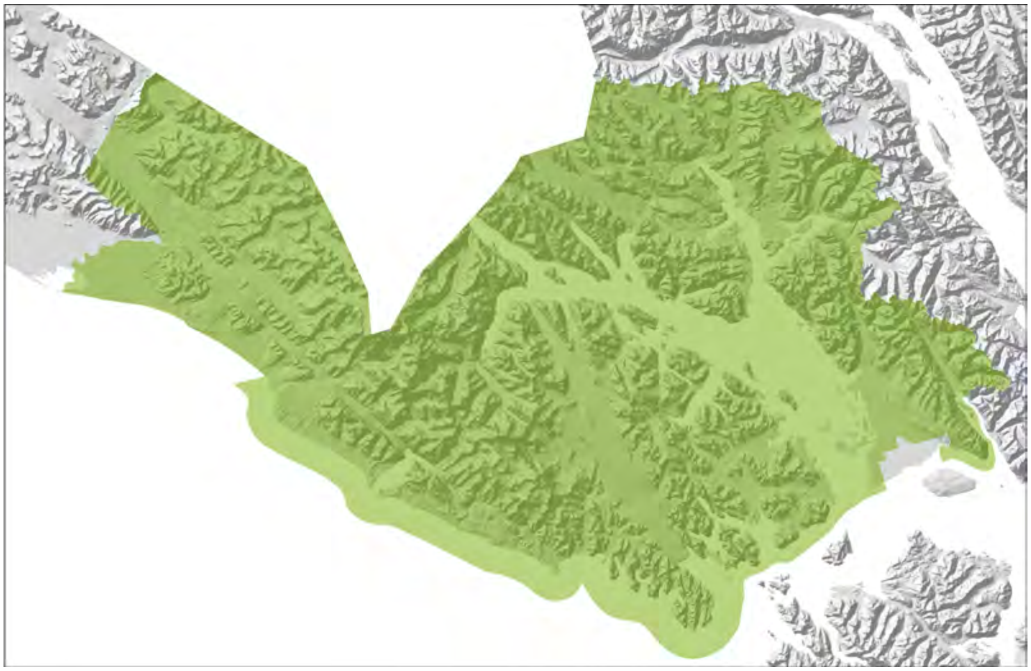

Figure A2: Location of areas (in bright pink) mapped as 20AF2—Entisols, alluvial fans, 0 to 35 percent slopes, in Glacier Bay National Park and Preserve. This map unit is of minor extent in the park. It occurs north of the Alsek River, at the southern end of the Brabazon Range.

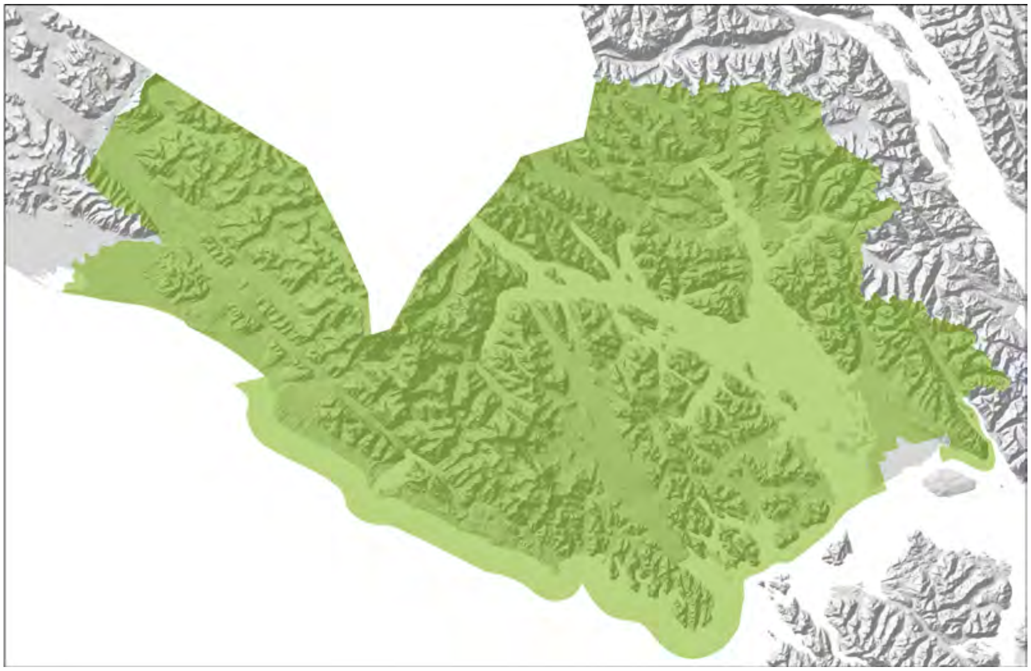

Figure A3: Location of areas (in bright pink) mapped as 20CL1—Strawberry-Fingerock complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve. This map unit is of minor extent in the park. It occurs south of Bartlett Cove and north of Gustavus Point.

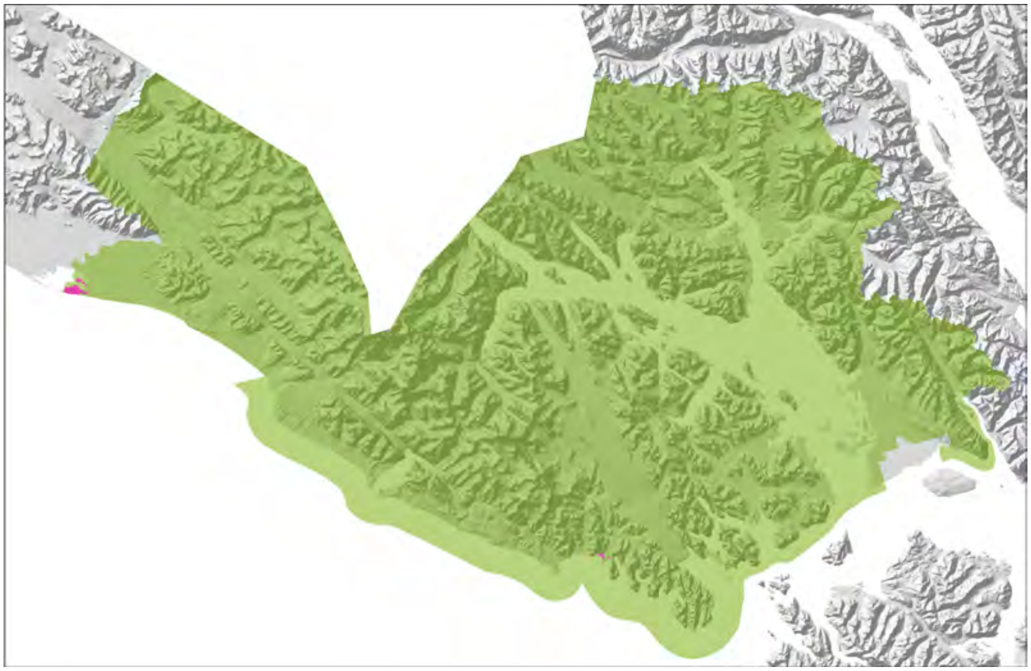

Figure A4: Location of areas (in bright pink) mapped as 20CP2—Beaches-Monashka-Murkbay complex, 0 to 3 percent slopes, in Glacier Bay National Park and Preserve.

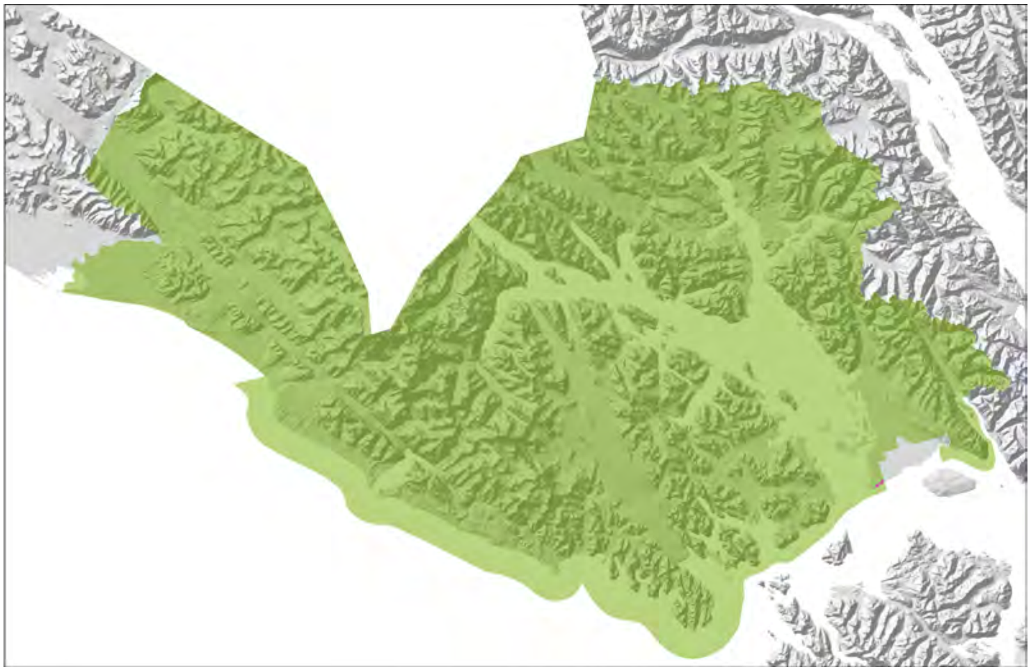

Figure A5: Location of areas (in bright pink) mapped as 20CPF—Icy-Excursion complex, 0 to 1 percent slopes, in Glacier Bay National Park and Preserve.

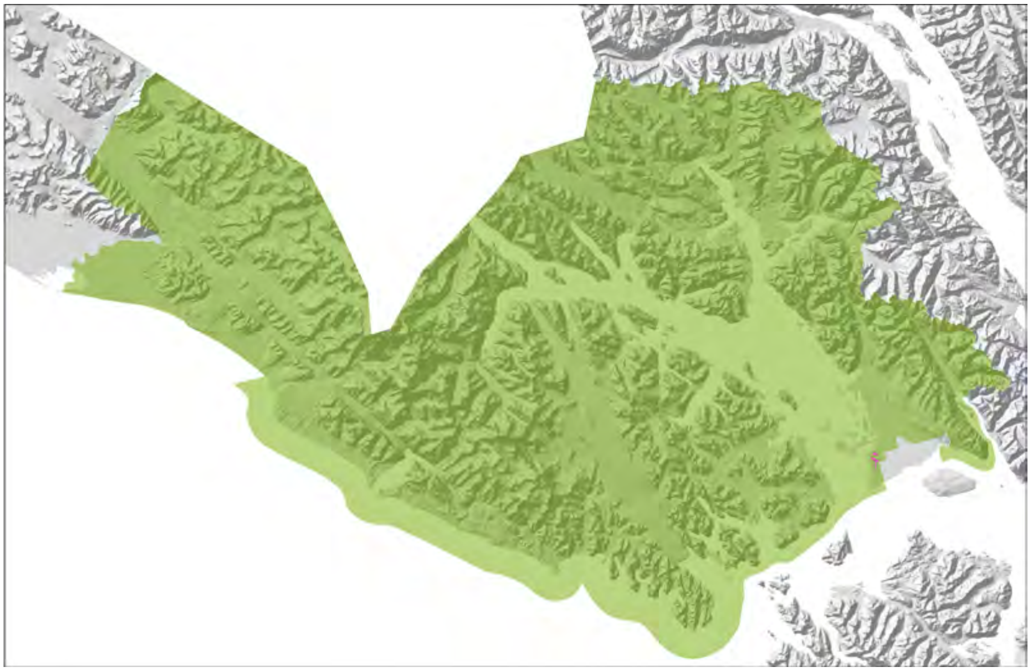

Figure A6: Location of areas (in bright pink) mapped as 20ED1—Gustavus-Bartlettcove complex, 5 to 20 percent slopes, in Glacier Bay National Park and Preserve.

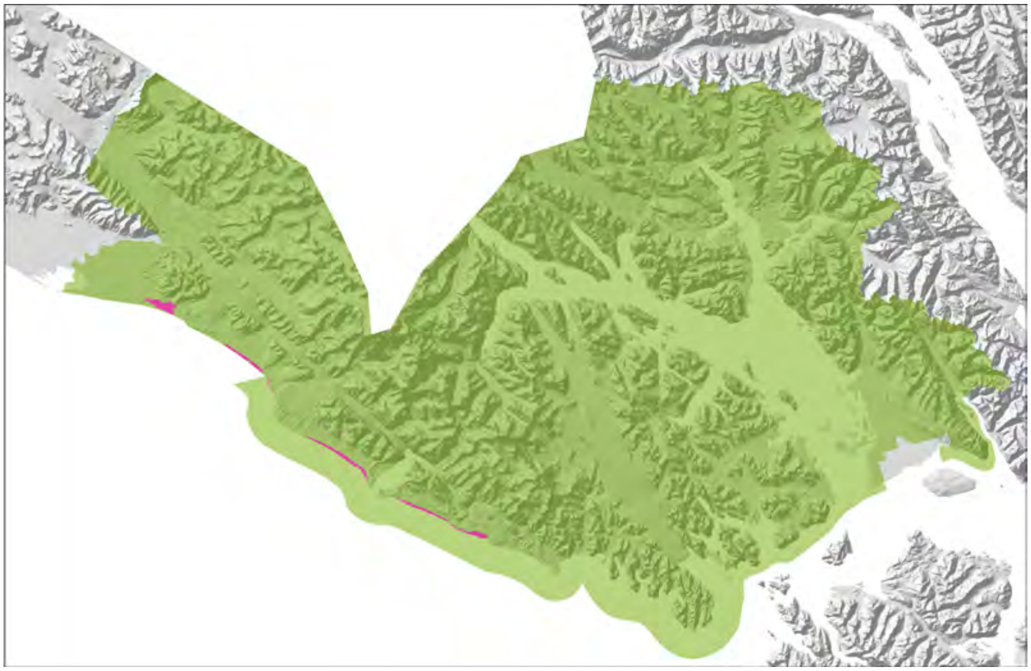

Figure A7: Location of areas (in bright pink) mapped as 20ED2—Beardslee-Monashka complex, 0 to 15 percent slopes, in Glacier Bay National Park and Preserve.

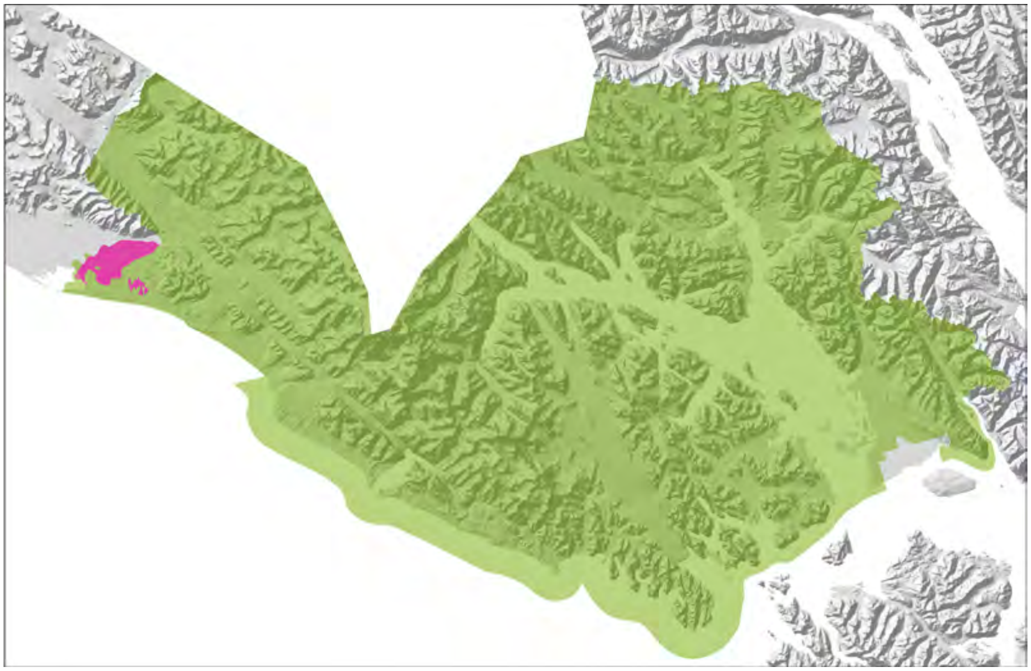

Figure A8: Location of areas (in bright pink) mapped as 20FP1—Drybay-Tidalwave complex, 0 to 8 percent slopes, in Glacier Bay National Park and Preserve.

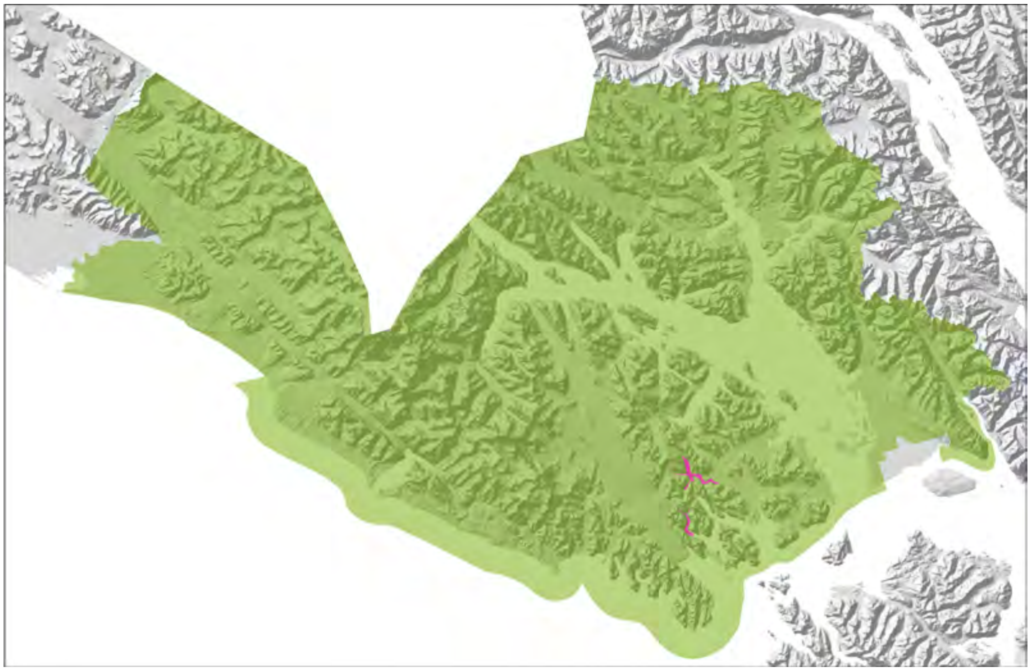

Figure A9: Location of areas (in bright pink) mapped as 20FP2—Bertha-Puffin complex, 0 to 15 percent slopes, in Glacier Bay National Park and Preserve.

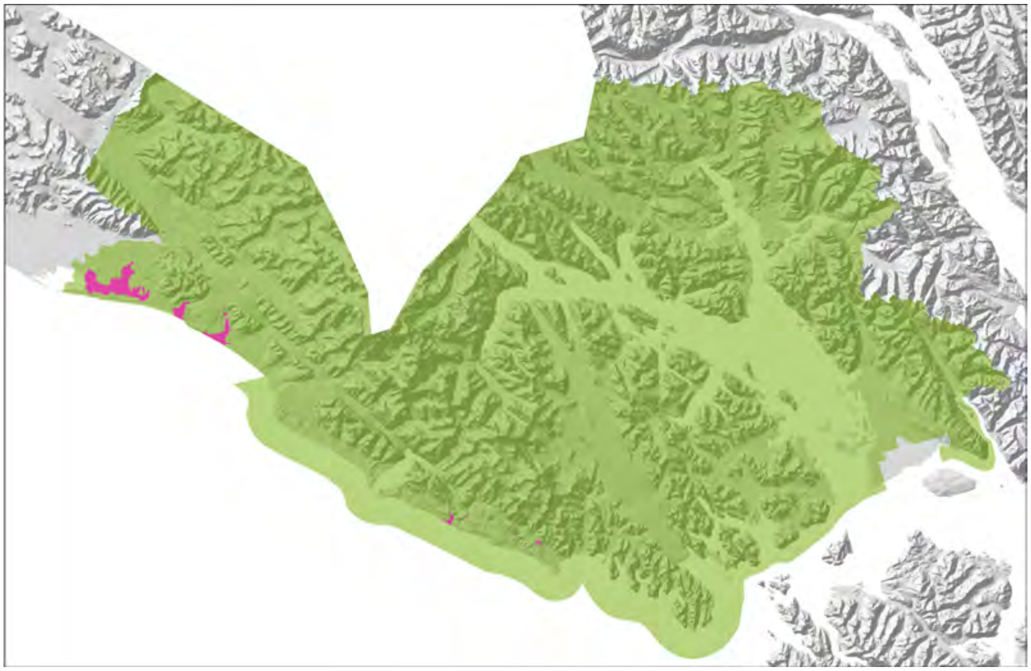

Figure A10: Location of areas (in bright pink) mapped as 20FP3—Tidalwave-Ashmun, frequently ponded-Drybay complex, 0 to 10 percent slopes, in Glacier Bay National Park and Preserve.

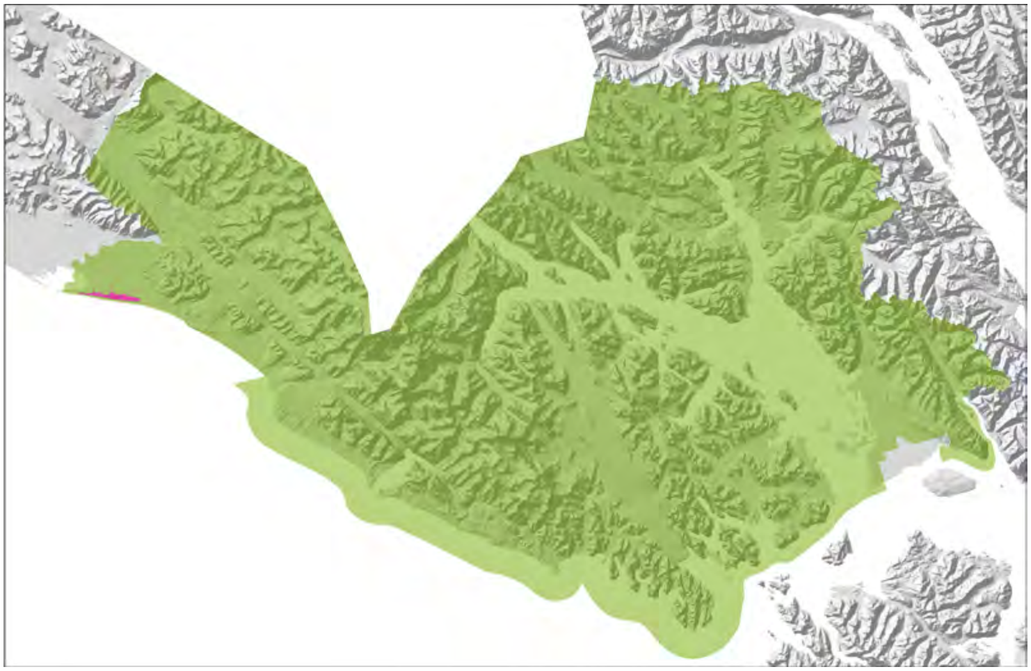

Figure A11: Location of areas (in bright pink) mapped as 20FPL—Cryaquents-Typic Cryaquents-Water complex, estuaries, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

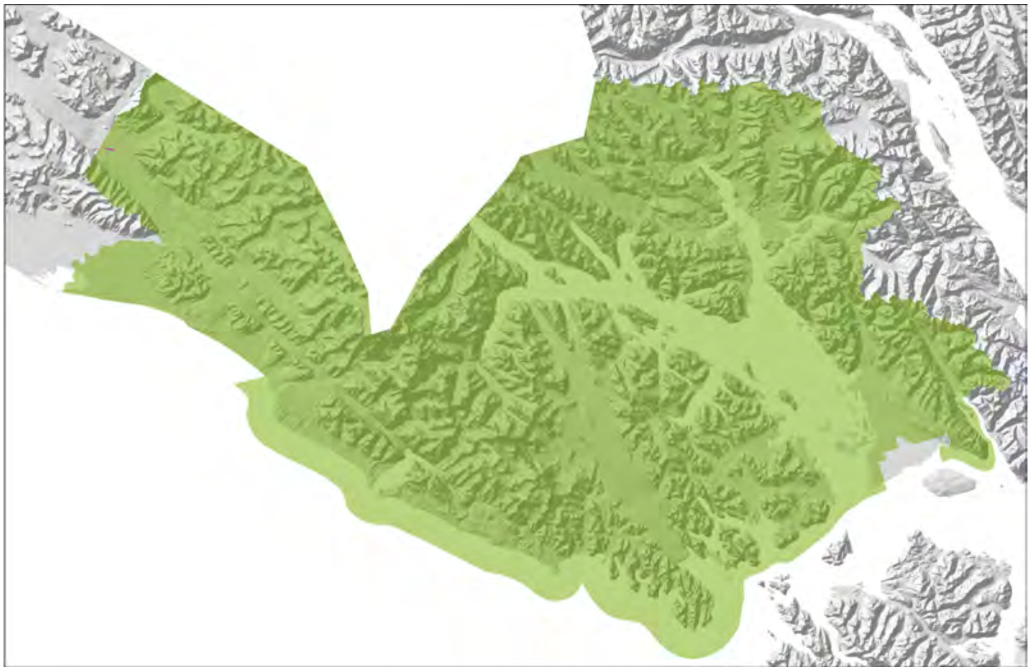

Figure A12: Location of areas (in bright pink) mapped as 20FPM—Typic Cryaquents, flood plains, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

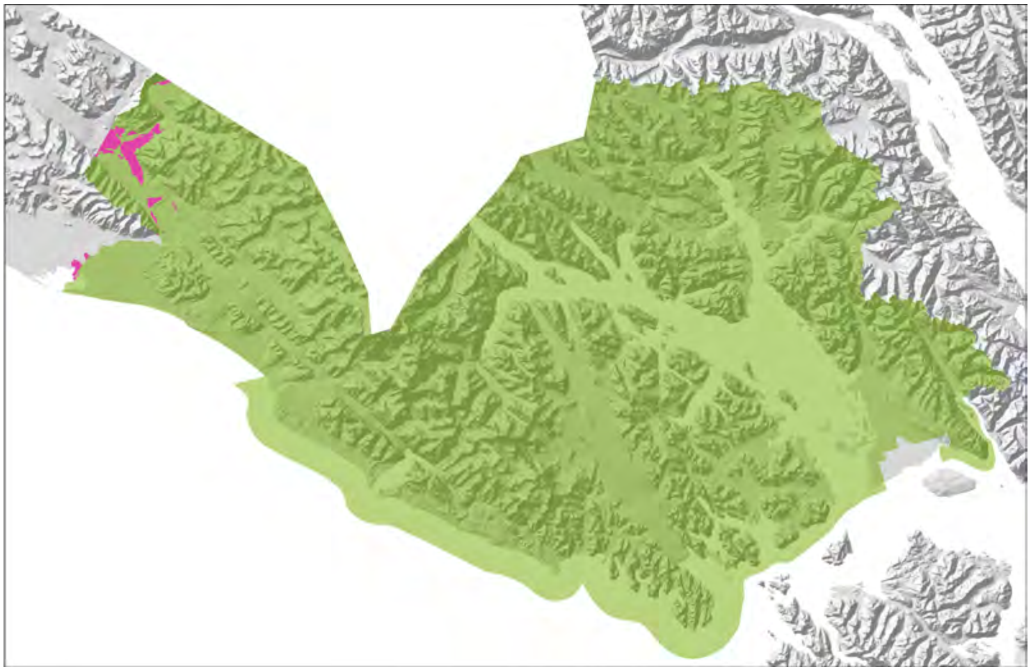

Figure A13: Location of areas (in bright pink) mapped as 20FPY—Oxyaquic Cryorthents-Typic Cryaquents association, flood plains, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

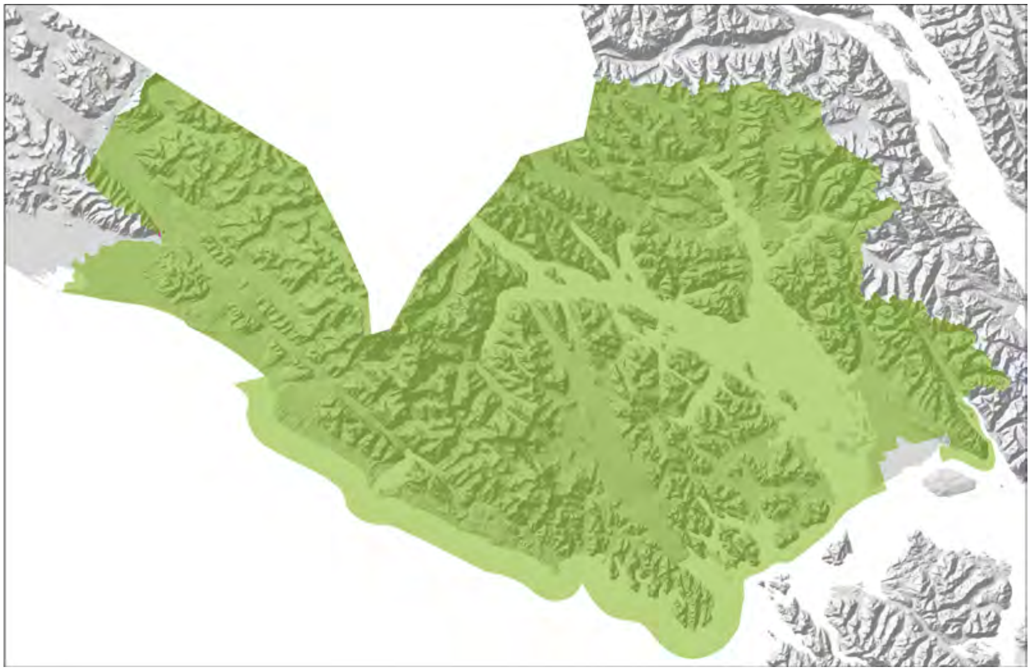

Figure A14: Location of areas (in bright pink) mapped as 20FPZ—Typic Cryorthents-Typic Cryofluvents association, flood plains, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve. This map unit is of minor extent in the park. It occurs west of Gateway Knob along the Alsek River.

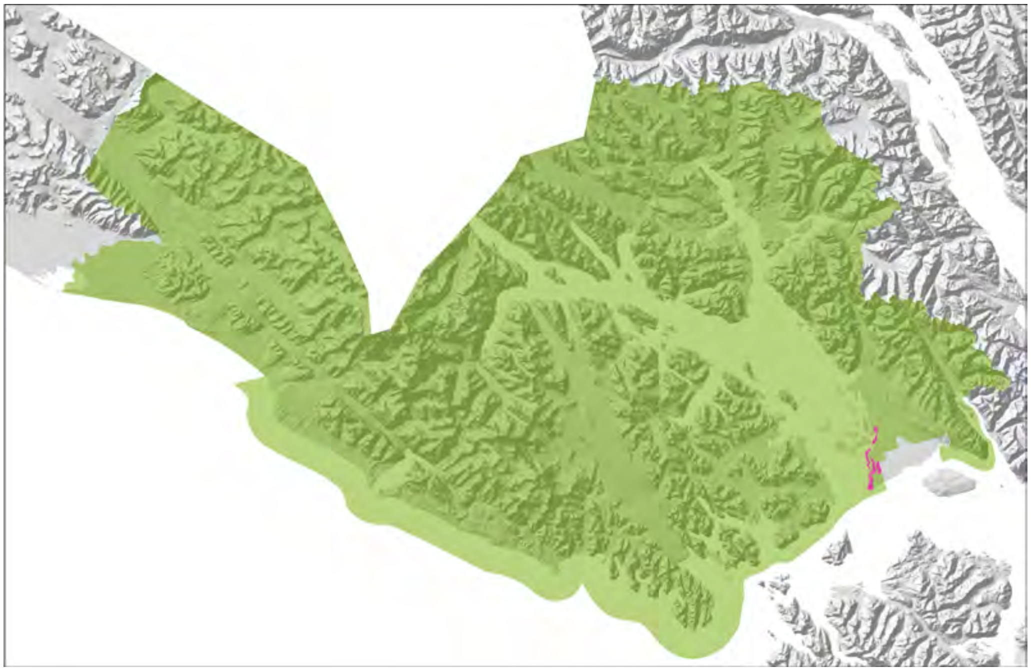

Figure A15: Location of areas (in bright pink) mapped as 20GP1—Gustavus-Ibach-Scidmore complex, 0 to 30 percent slopes, in Glacier Bay National Park and Preserve.

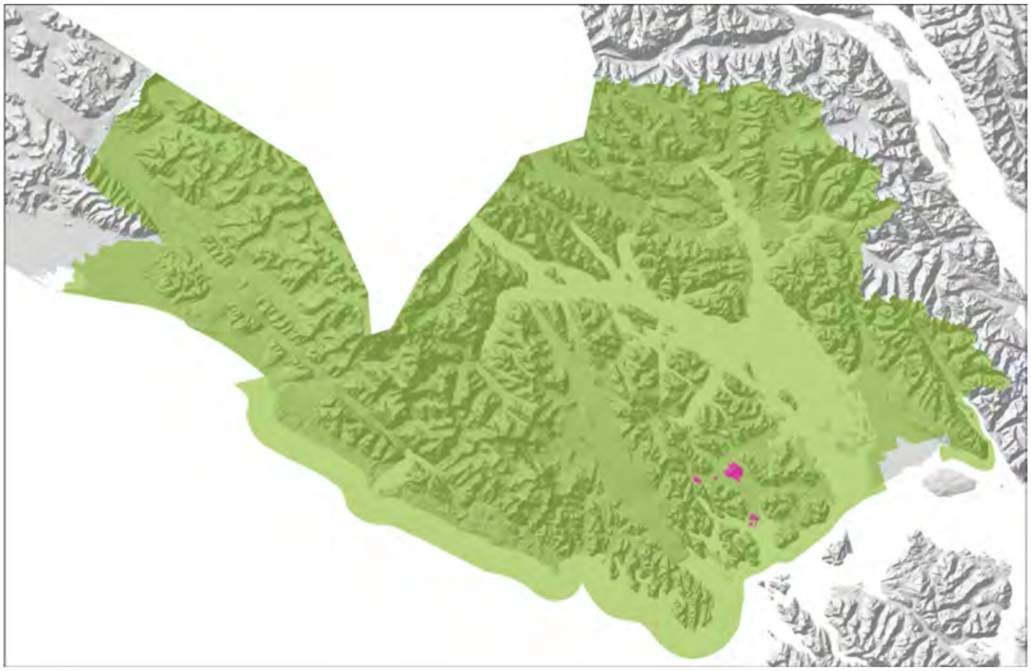

Figure A16: Location of areas (in bright pink) mapped as 20HI1—Foad-Boussole complex, 25 to 65 percent slopes, in Glacier Bay National Park and Preserve.

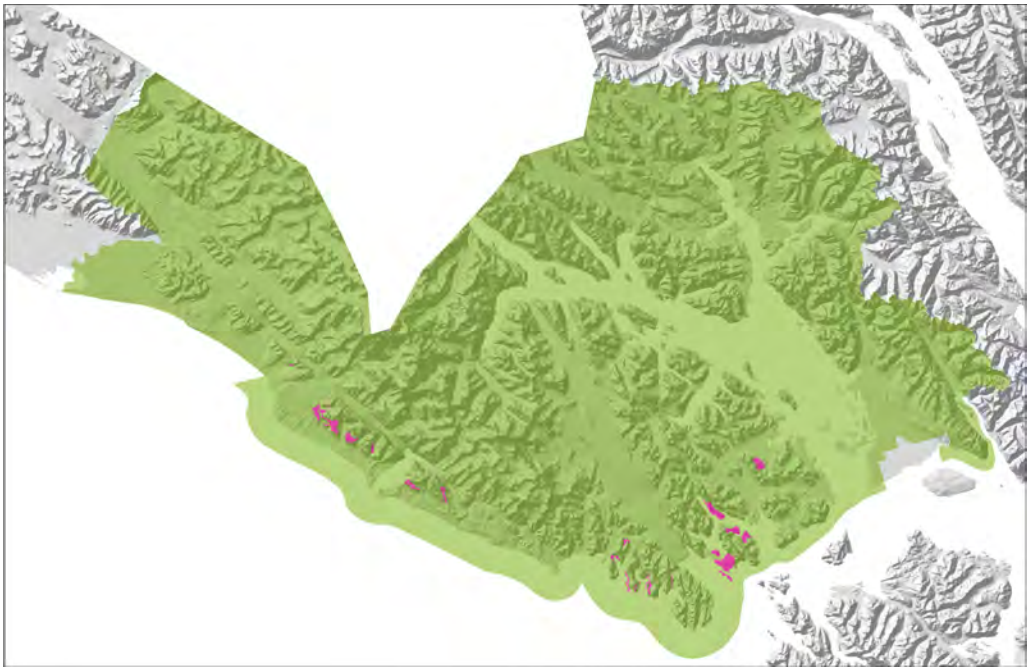

Figure A17: Location of areas (in bright pink) mapped as 20HI2—Kashoto-Foad-Kutskloh complex, 2 to 55 percent slopes, in Glacier Bay National Park and Preserve.

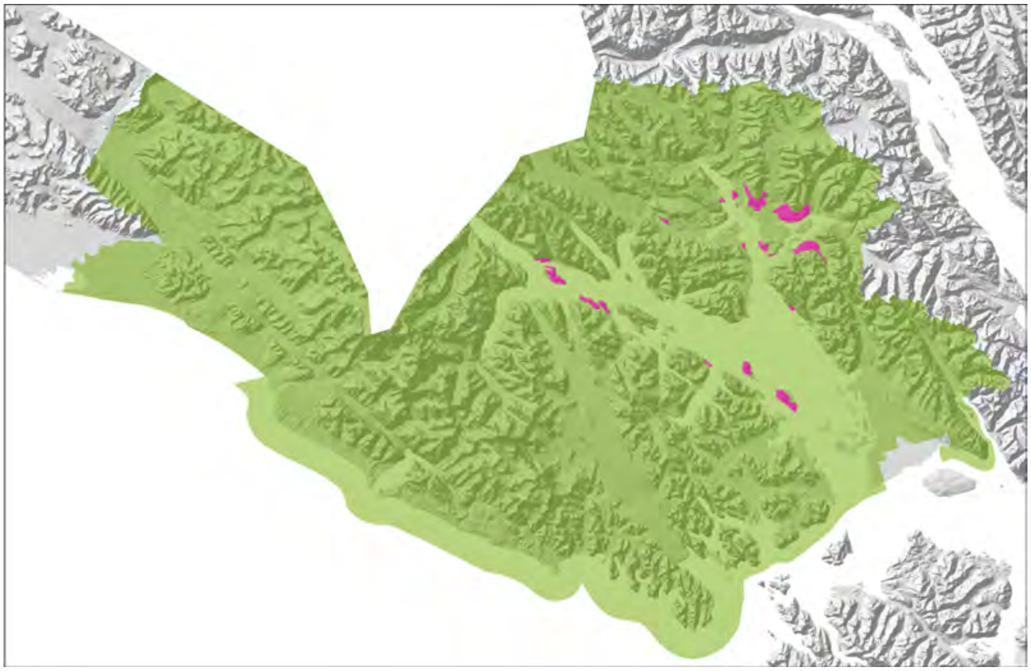

Figure A18: Location of areas (in bright pink) mapped as 20HI3—Polkapenn-Dagelet-Nunatak complex, 20 to 65 percent slopes, in Glacier Bay National Park and Preserve.

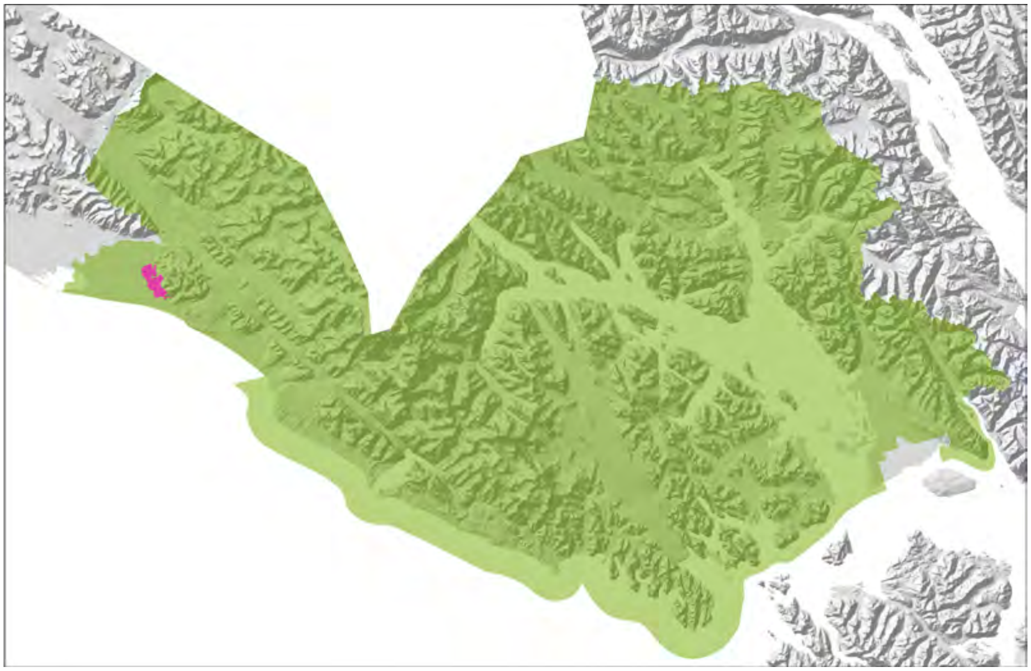

Figure A19: **Location of areas (in bright pink) mapped as 20HI5—Kaknau-Tricklake complex, 20 to 65 percent slopes, in Glacier Bay National Park and Preserve.**

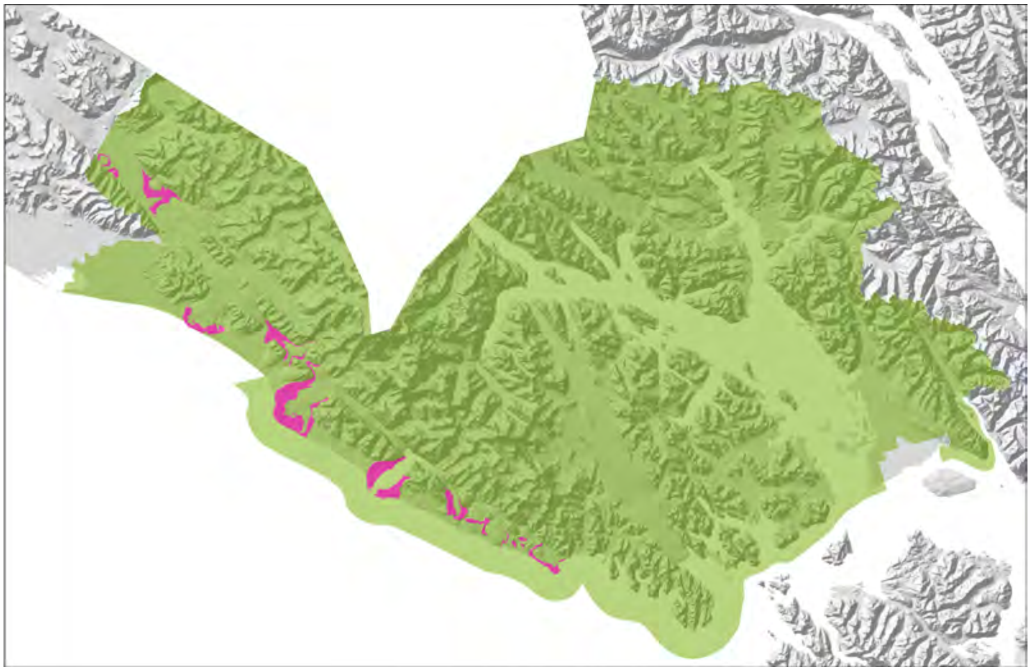

Figure A20: **Location of areas (in bright pink) mapped as 20HIB—Drybay-Kaknau-Vivid complex, 5 to 35 percent slopes, in Glacier Bay National Park and Preserve.**

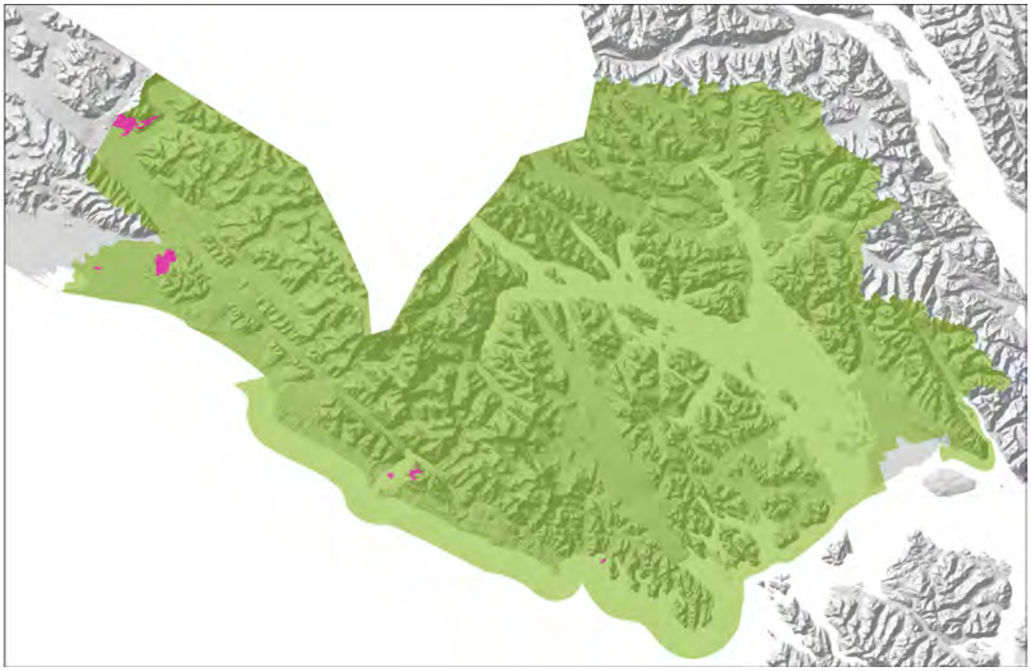

Figure A21: Location of areas (in bright pink) mapped as 20HID—Grandplateau-Crillon complex, 10 to 60 percent slopes, in Glacier Bay National Park and Preserve.

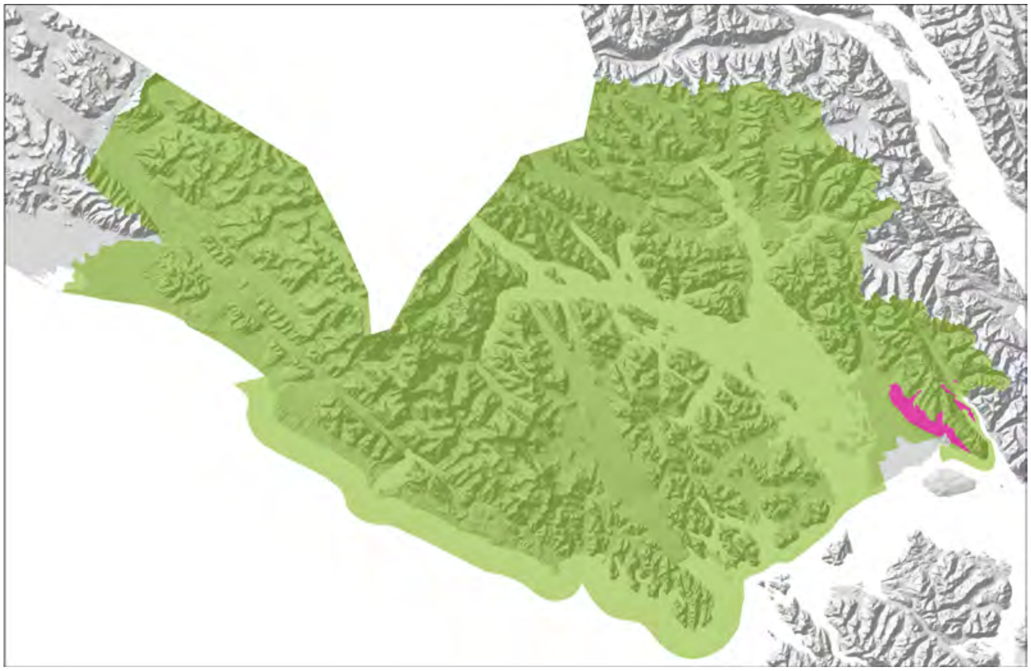

Figure A22: Location of areas (in bright pink) mapped as 20HIE—Kashoto-Kutskloh-Wachusett complex, 5 to 55 percent slopes, in Glacier Bay National Park and Preserve.

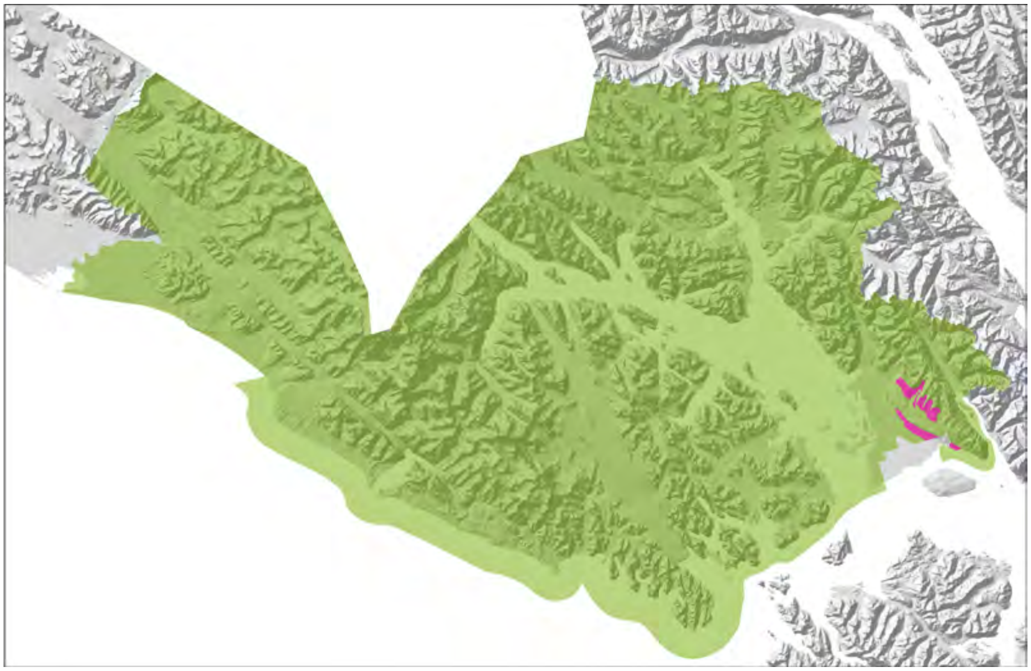

Figure A23: Location of areas (in bright pink) mapped as 20HIF—Kashoto-Wachusett complex, 2 to 25 percent slopes, in Glacier Bay National Park and Preserve.

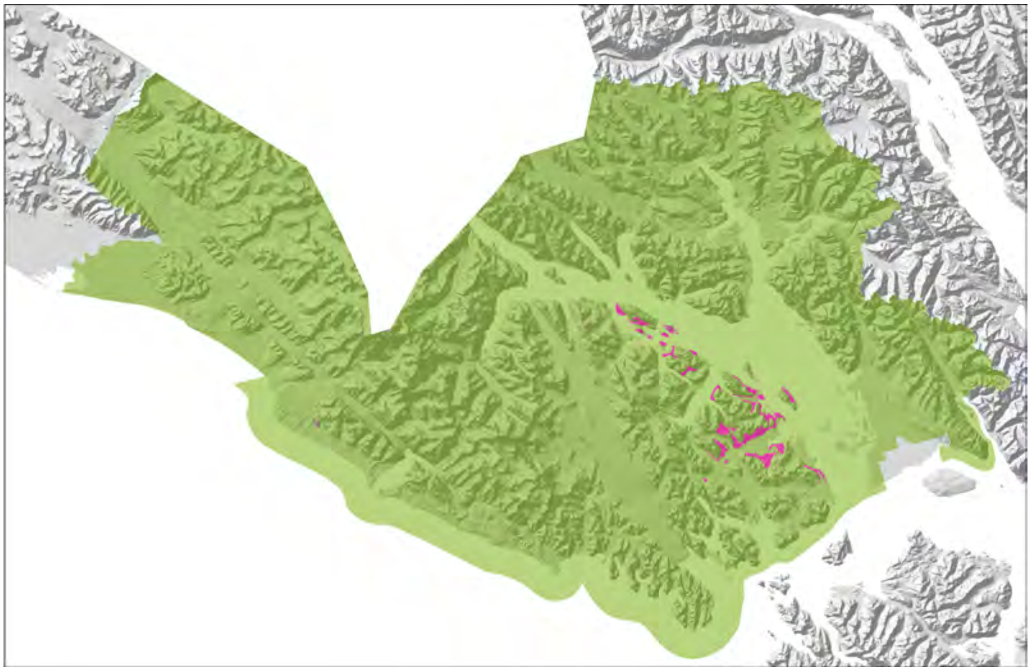

Figure A24: Location of areas (in bright pink) mapped as 20HIN—Polkapenn-Nunatak complex, 20 to 60 percent slopes, in Glacier Bay National Park and Preserve.

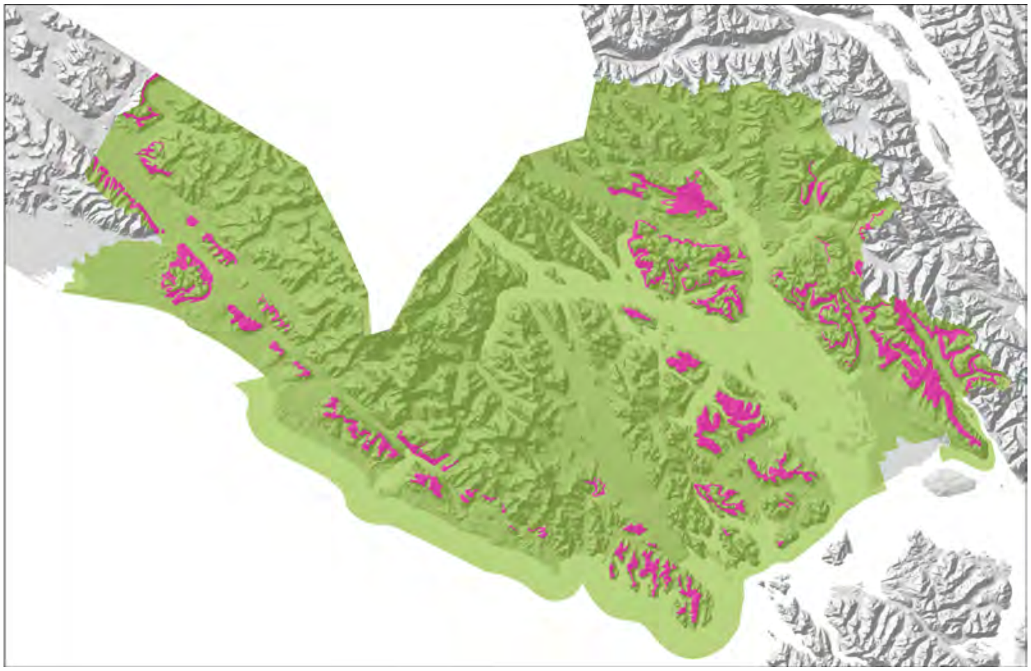

Figure A25: Location of areas (in bright pink) mapped as 20HIS—Lithic Cryorthents and Typic Humicryepts, 76 to 140 percent slopes, in Glacier Bay National Park and Preserve.

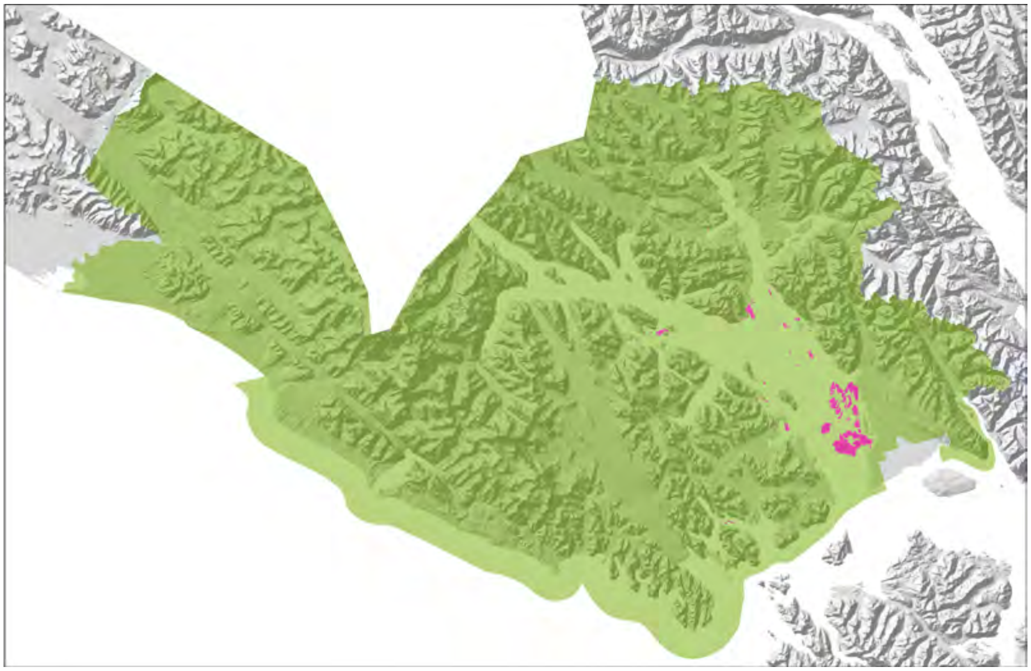

Figure A26: Location of areas (in bright pink) mapped as 20IS1—Centotaph-Water, saline-Beaches complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

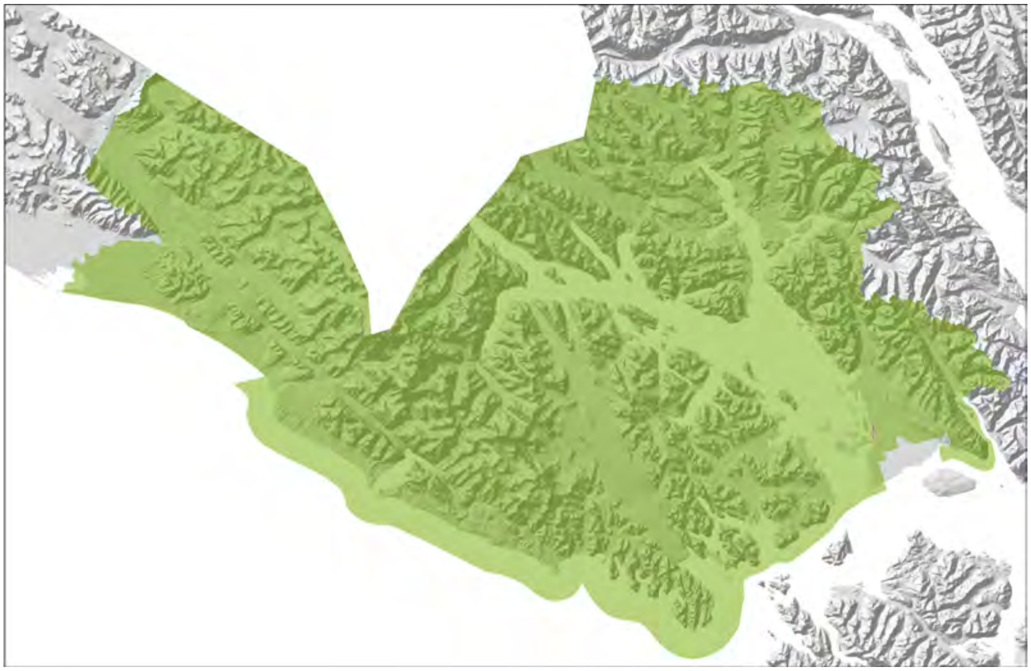

Figure A27: Location of areas (in bright pink) mapped as 20LF1—Abyss-Astrolable complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve. This map unit is of minor extent in the park. It occurs along the Bartlett River, northeast of Bartlett Cove.

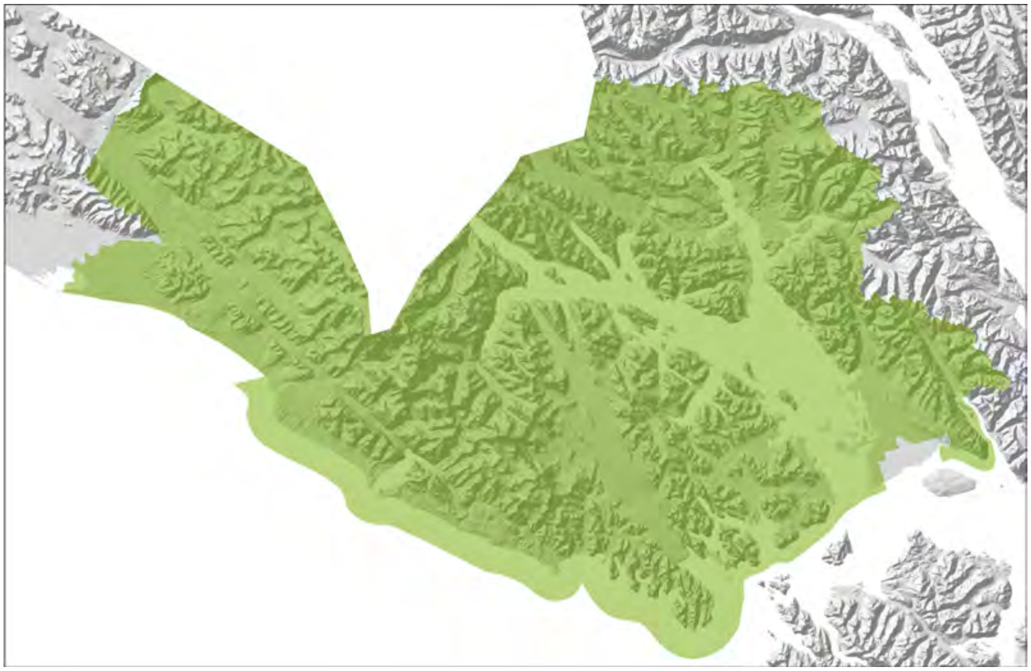

Figure A28: Location of areas (in bright pink) mapped as 20MD1—Gustavus-Perouse complex, 0 to 15 percent slopes, in Glacier Bay National Park and Preserve. This map unit is of minor extent in the park. It occurs north of the town of Gustavus.

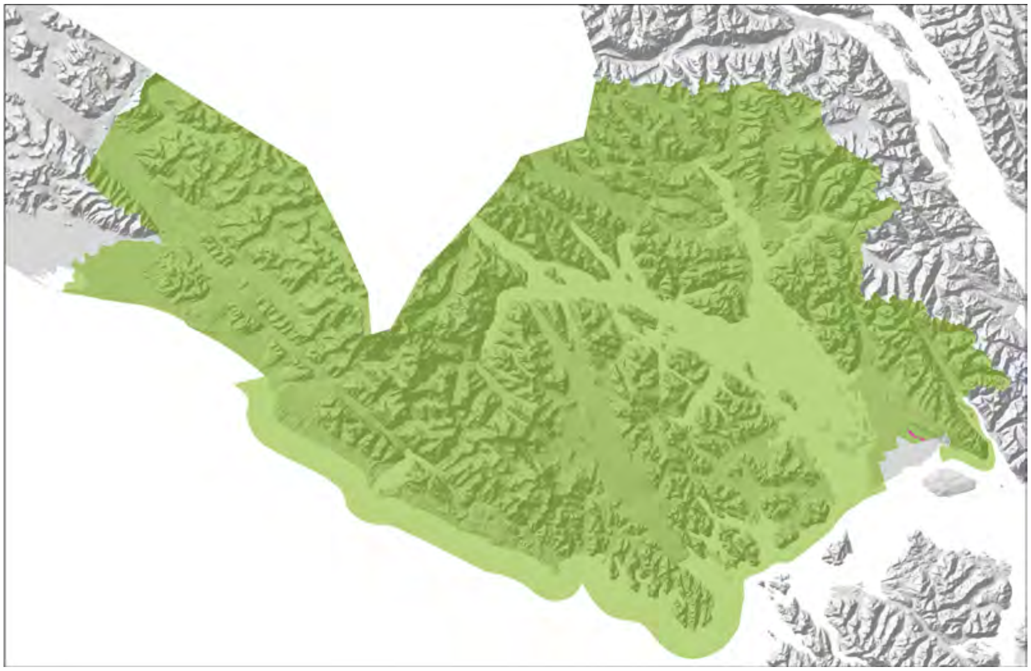

Figure A29: Location of areas (in bright pink) mapped as 20MF1—Geikie-Gustavus-Scidmore complex, 0 to 8 percent slopes, in Glacier Bay National Park and Preserve.

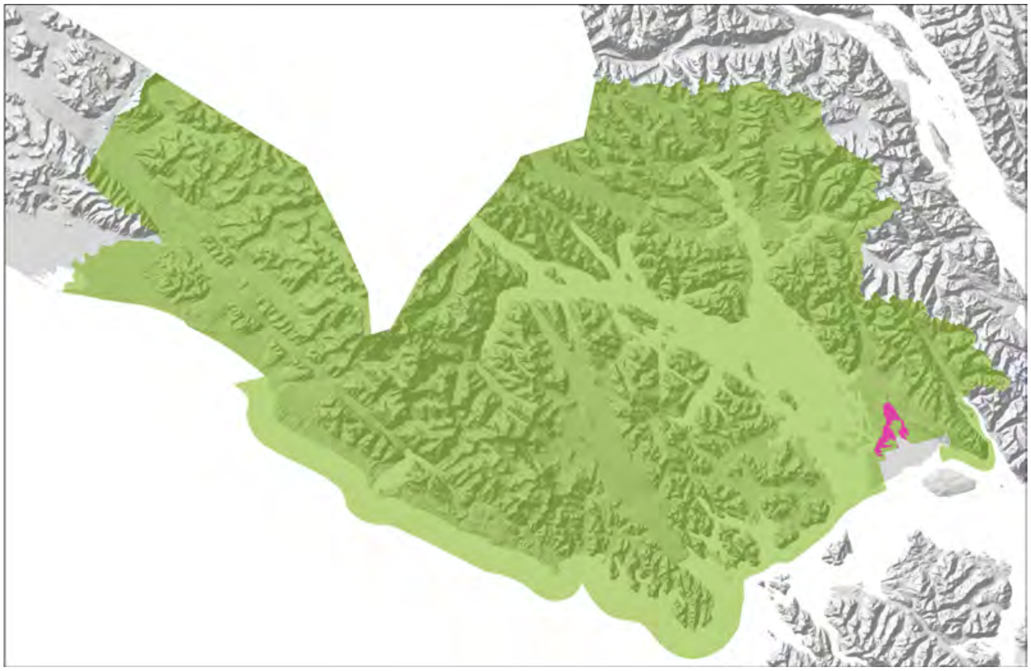

Figure A30: Location of areas (in bright pink) mapped as 20MF2—Gustavus-Geikie complex, 0 to 10 percent slopes, in Glacier Bay National Park and Preserve.

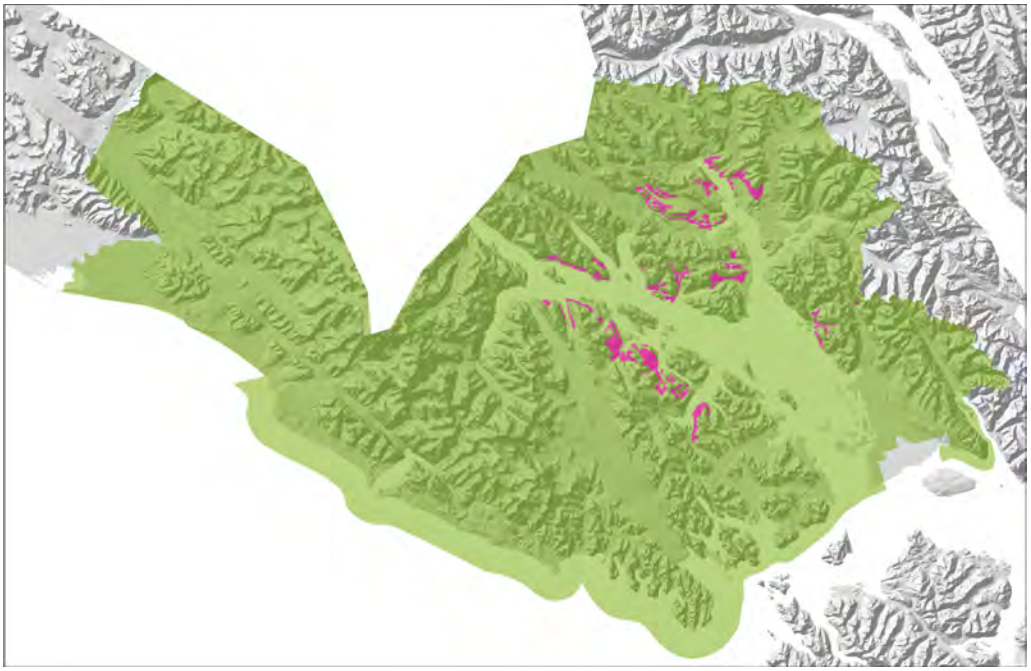

Figure A31: Location of areas (in bright pink) mapped as 20MT1—Bearisland-Kadachun-Rubble land complex, 15 to 45 percent slopes, in Glacier Bay National Park and Preserve.

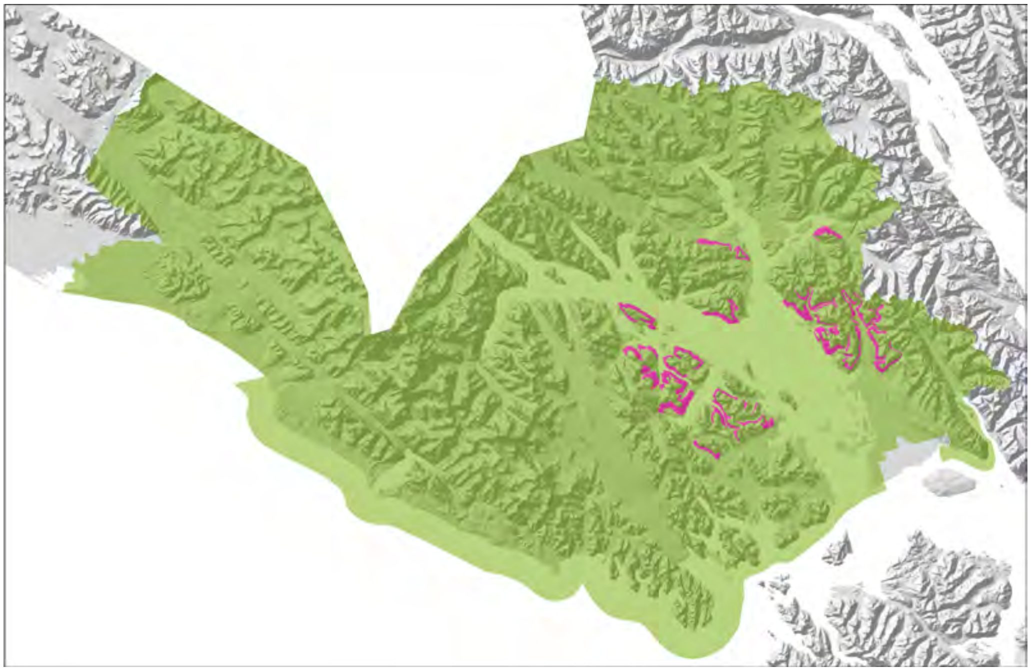

Figure A32: Location of areas (in bright pink) mapped as 20MT2—Escures-Polkapenn-Nunatak complex, 45 to 95 percent slopes, in Glacier Bay National Park and Preserve.

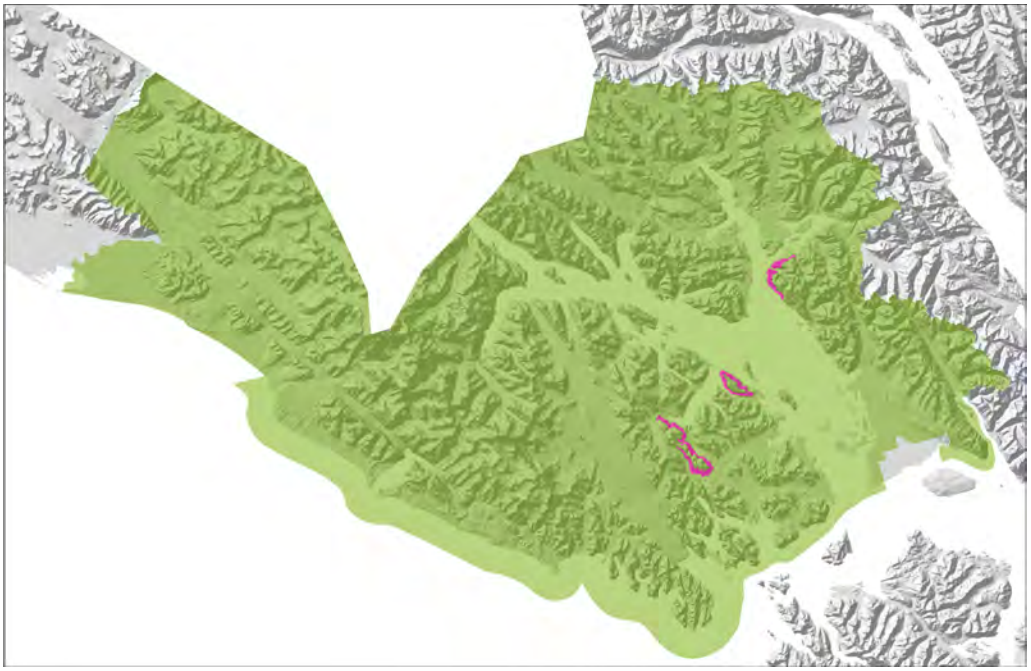

Figure A33: Location of areas (in bright pink) mapped as 20MT3—Polkapenn-Bearisland-Enigma complex, 40 to 100 percent slopes, in Glacier Bay National Park and Preserve.

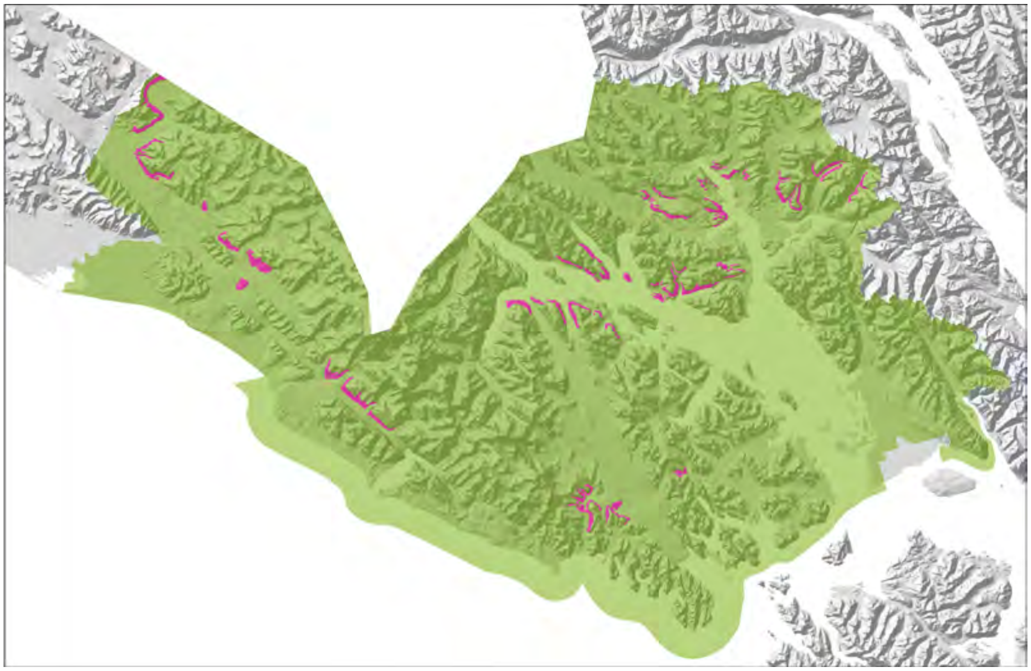

Figure A34: Location of areas (in bright pink) mapped as 20MT4—Seclusion-Rock outcrop complex, 45 to 100 percent slopes, in Glacier Bay National Park and Preserve.

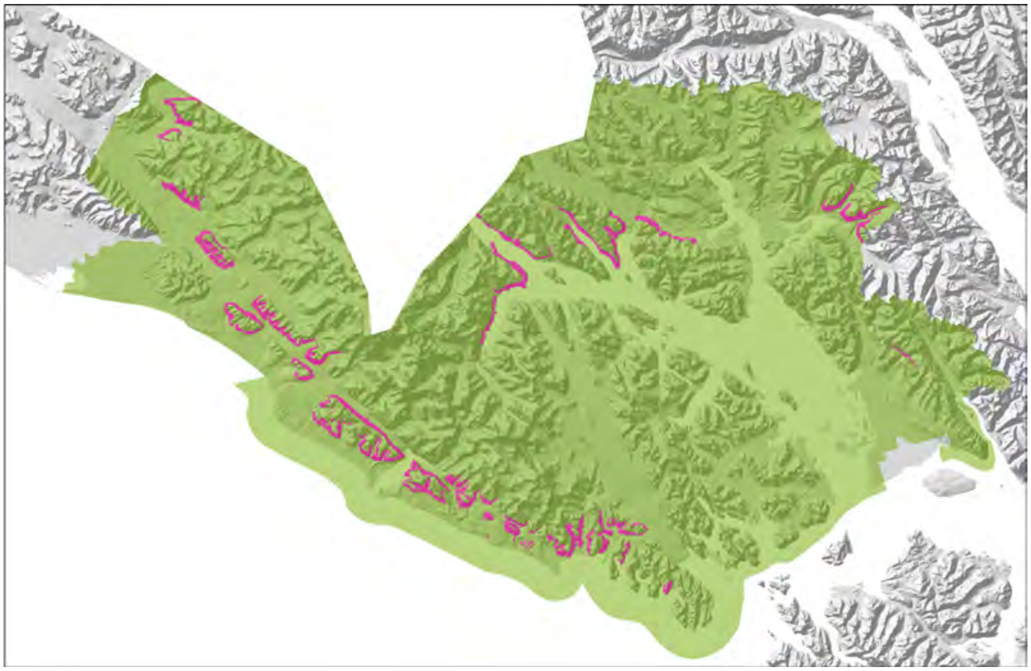

Figure A35: Location of areas (in bright pink) mapped as 20MT5—Rock outcrop-Seclusion-Skarn complex, 30 to 90 percent slopes, in Glacier Bay National Park and Preserve.

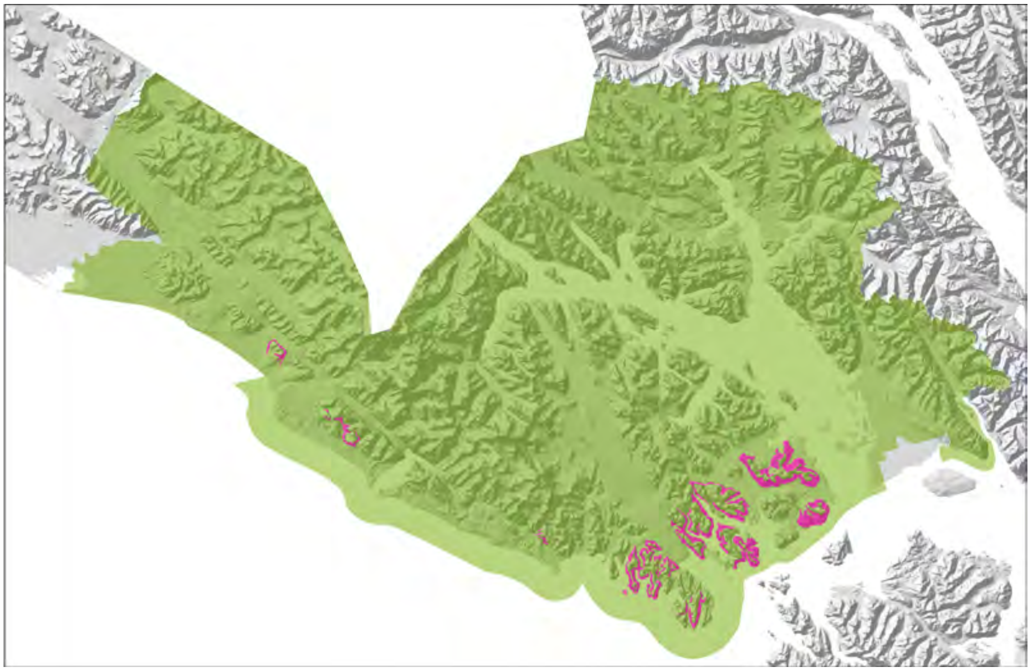

Figure A36: Location of areas (in bright pink) mapped as 20MT6—Bergbay-Boussole-Toyatte complex, 25 to 90 percent slopes, in Glacier Bay National Park and Preserve.

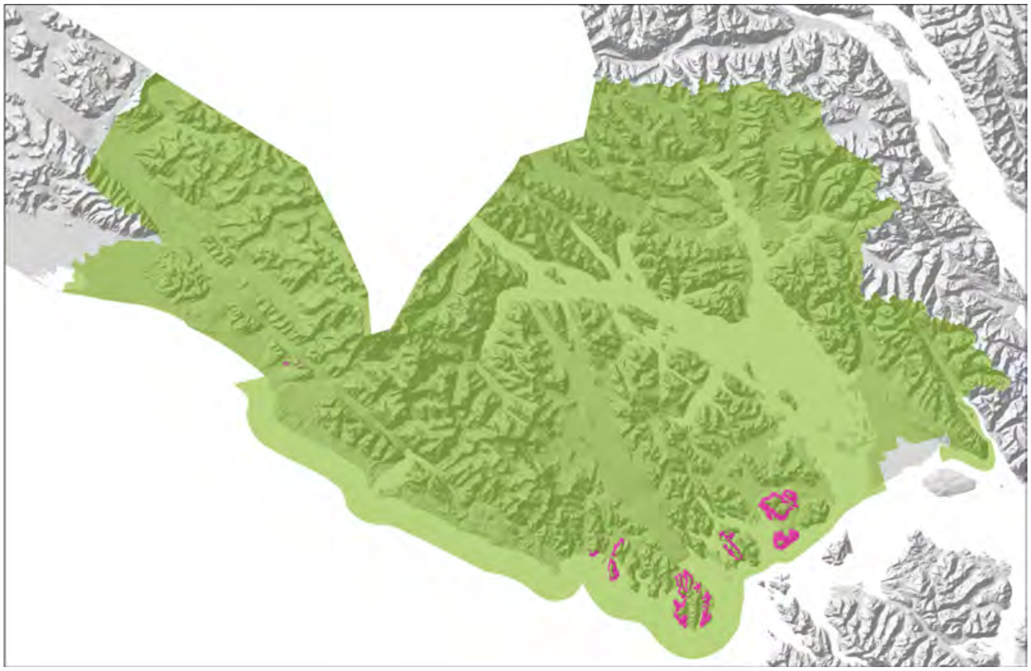

Figure A37: Location of areas (in bright pink) mapped as 20MT7—Foad-Abdallah-Justicecreek complex, 35 to 85 percent slopes, in Glacier Bay National Park and Preserve.

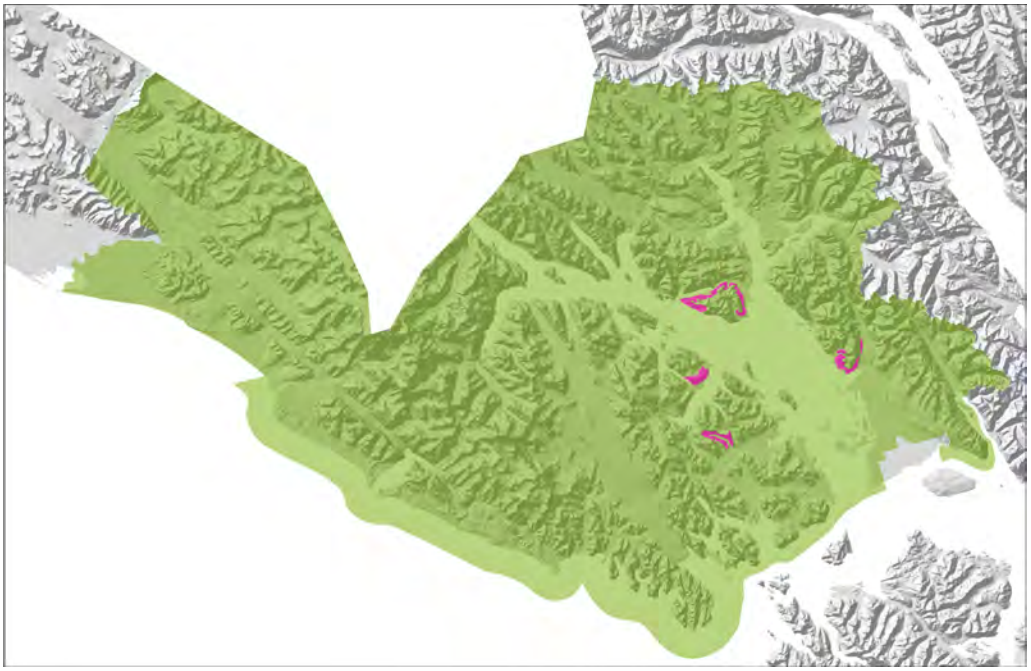

Figure A38: Location of areas (in bright pink) mapped as 20MTC—Skarn-Polkapenn-Kadachan complex, 25 to 90 percent slopes, in Glacier Bay National Park and Preserve.

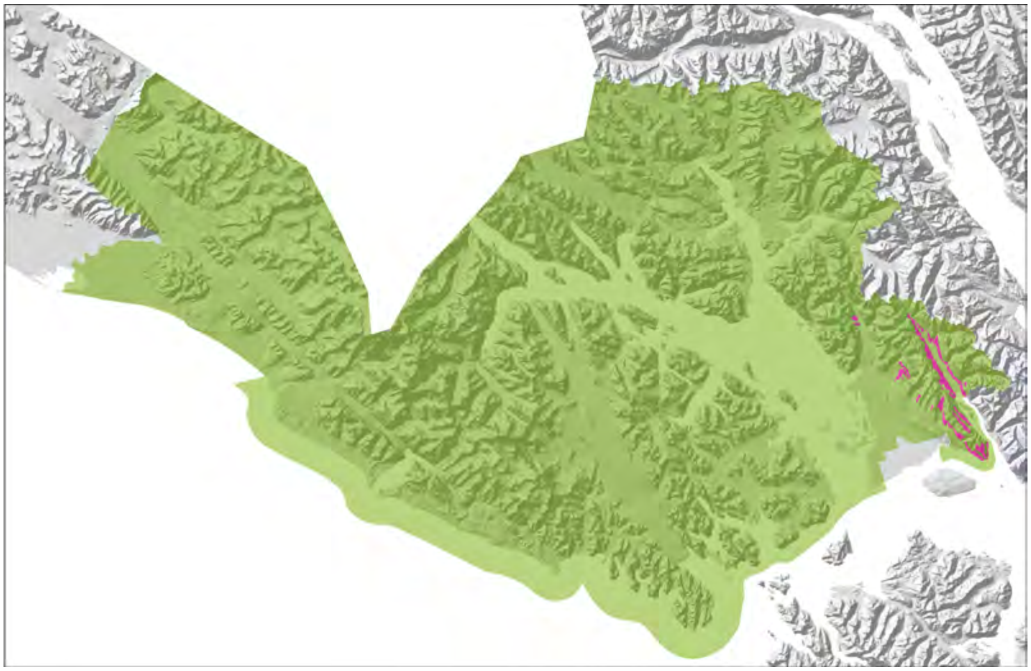

Figure A39: Location of areas (in bright pink) mapped as 20MTE—Wachusett-Maquinna-Boussole complex, 10 to 60 percent slopes, in Glacier Bay National Park and Preserve.

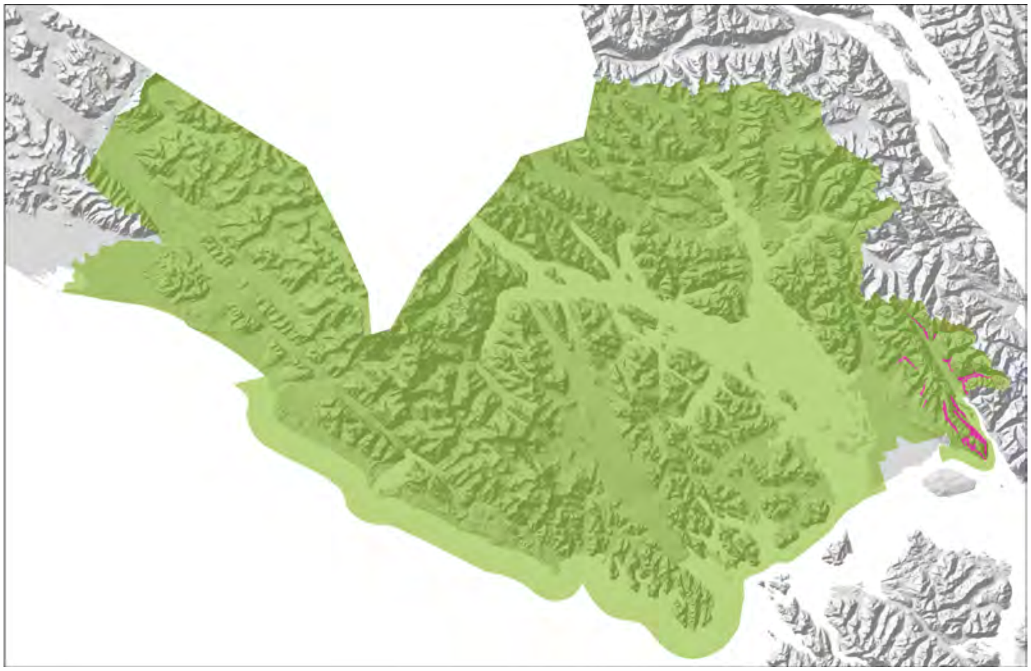

Figure A40: Location of areas (in bright pink) mapped as 20MTF—Wachusett-Maquinna-Enigma complex, 25 to 90 percent slopes, in Glacier Bay National Park and Preserve.

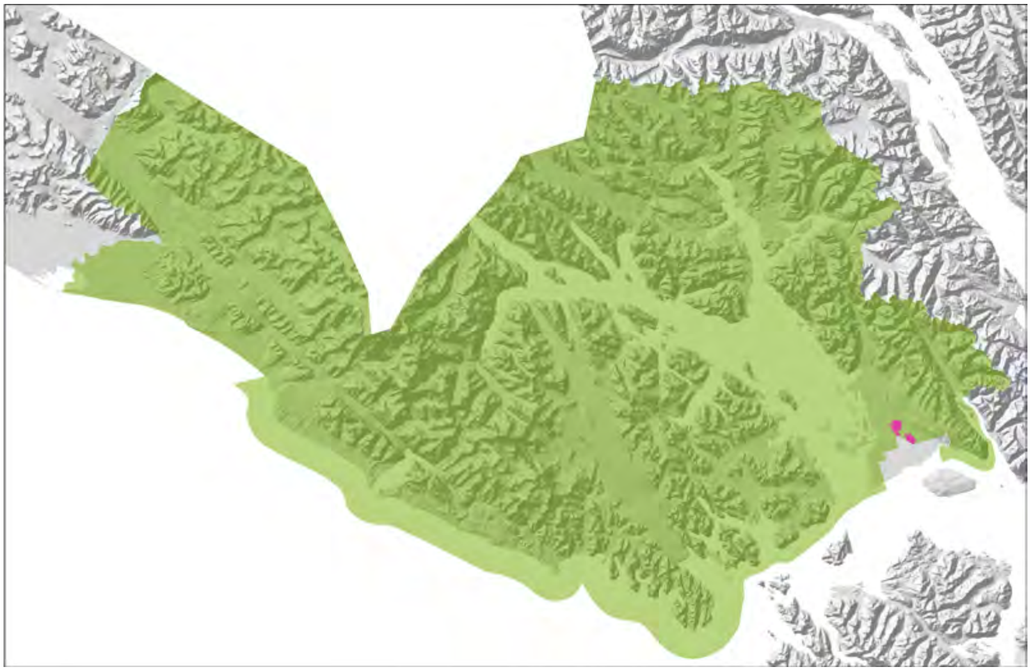

Figure A41: Location of areas (in bright pink) mapped as 20OC1—Scidmore-Perouse, frequently ponded complex, 0 to 3 percent slopes, in Glacier Bay National Park and Preserve.

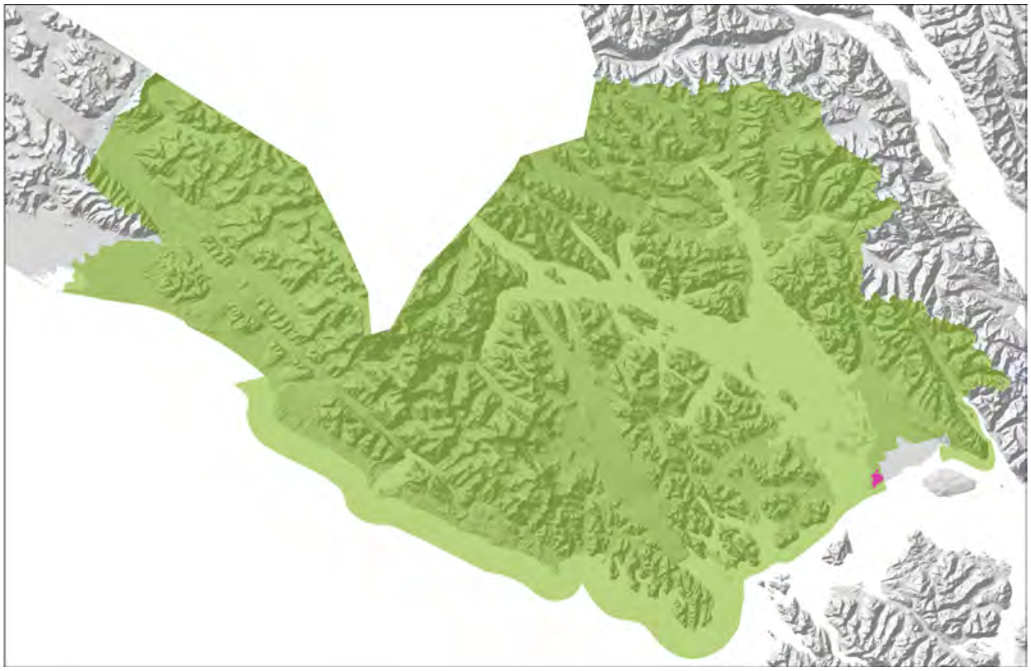

Figure A42: Location of areas (in bright pink) mapped as 20OD1—Gustavus-Lamplugh complex, 0 to 30 percent slopes, in Glacier Bay National Park and Preserve.

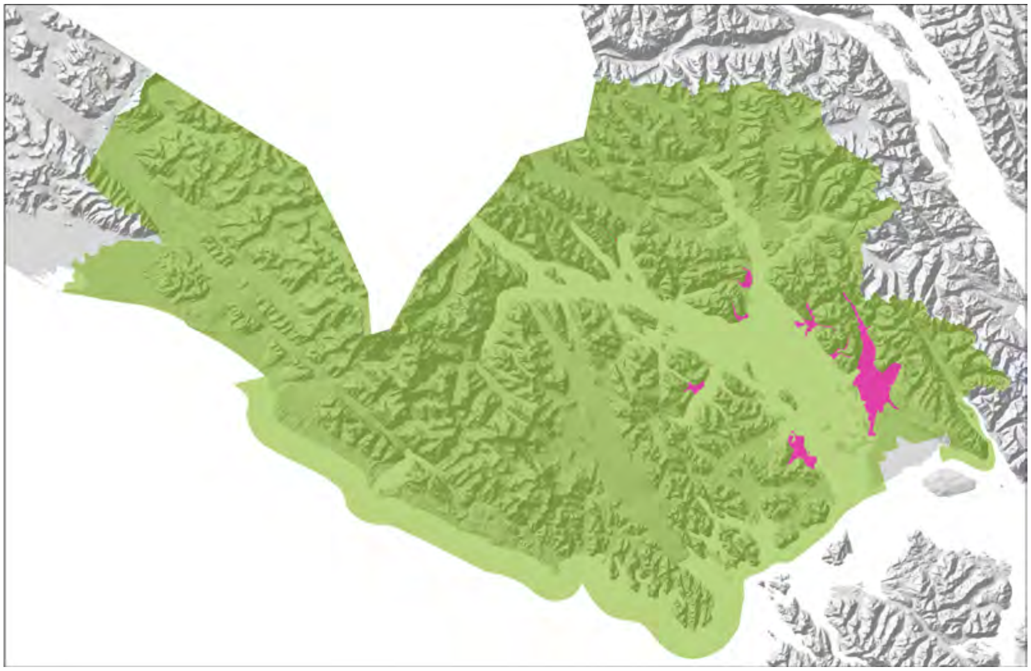

Figure A43: Location of areas (in bright pink) mapped as 20OP1—Fossil-Tyeen-Vivid complex, 0 to 15 percent slopes, in Glacier Bay National Park and Preserve.

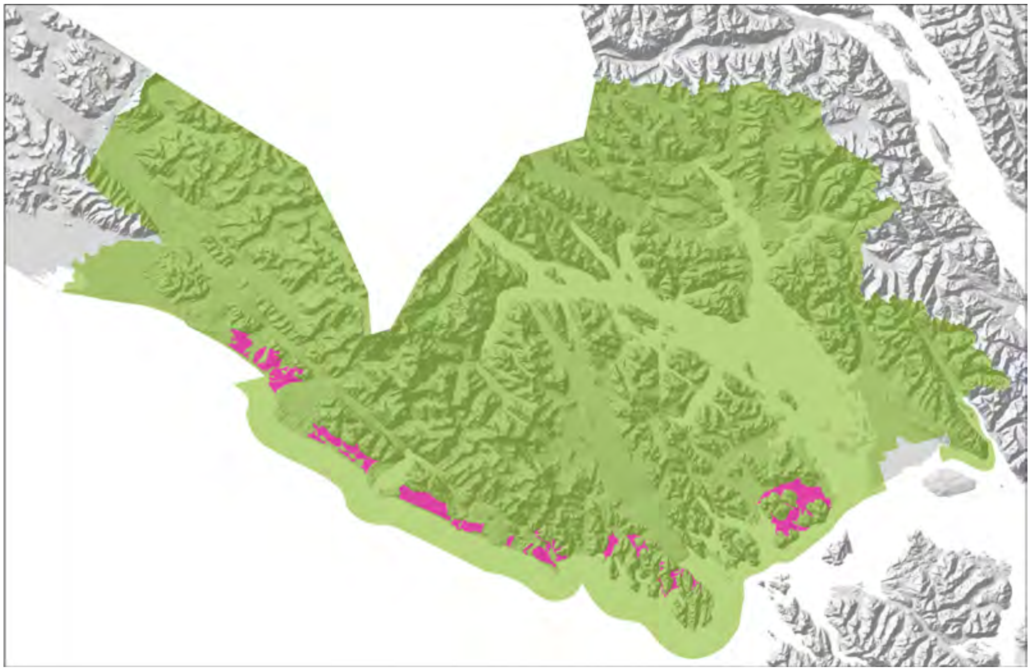

Figure A44: Location of areas (in bright pink) mapped as 20OP4—Kashoto-Annoksek-Bulky complex, 0 to 10 percent slopes, in Glacier Bay National Park and Preserve.

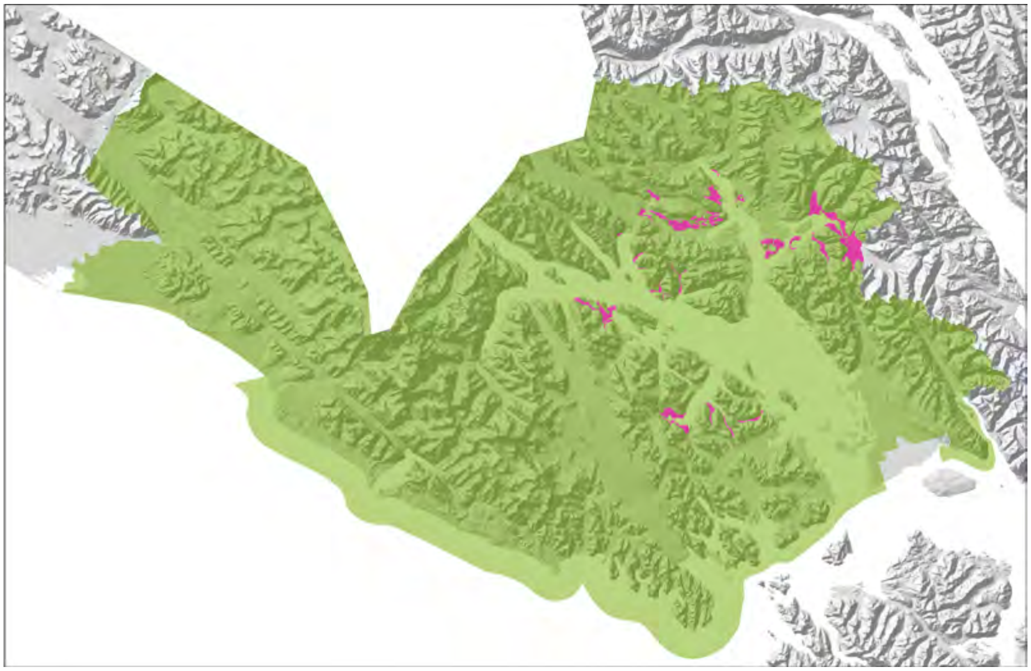

Figure A45: Location of areas (in bright pink) mapped as 20OP5—Fossil-Tyeen-Vivid complex, 15 to 45 percent slopes, in Glacier Bay National Park and Preserve.

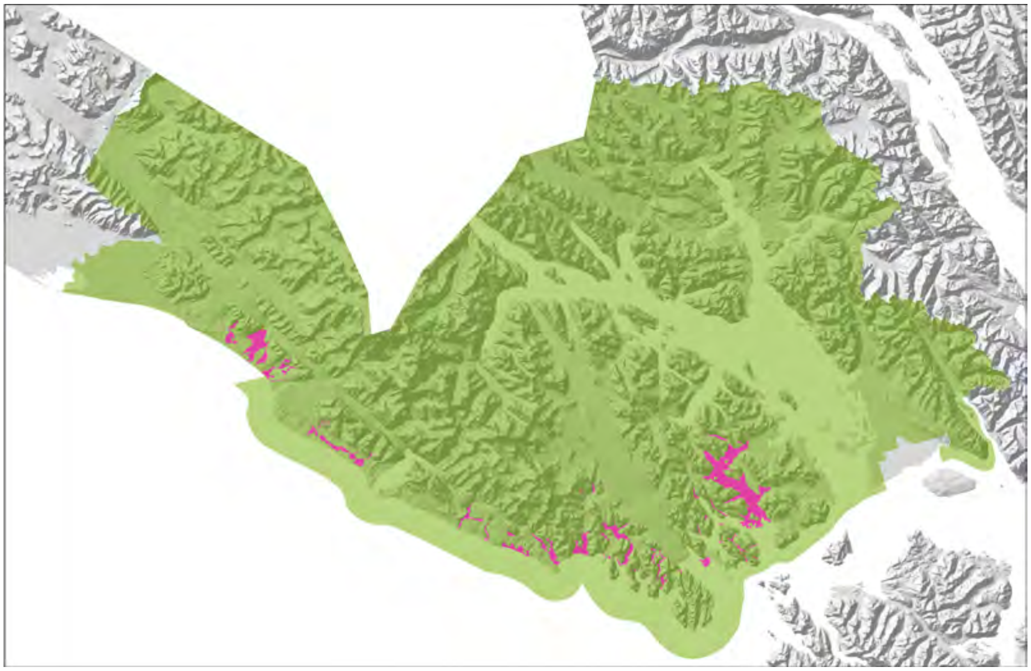

Figure A46: Location of areas (in bright pink) mapped as 20OP6—Bulky-Bertha-Icy complex, 0 to 10 percent slopes, in Glacier Bay National Park and Preserve.

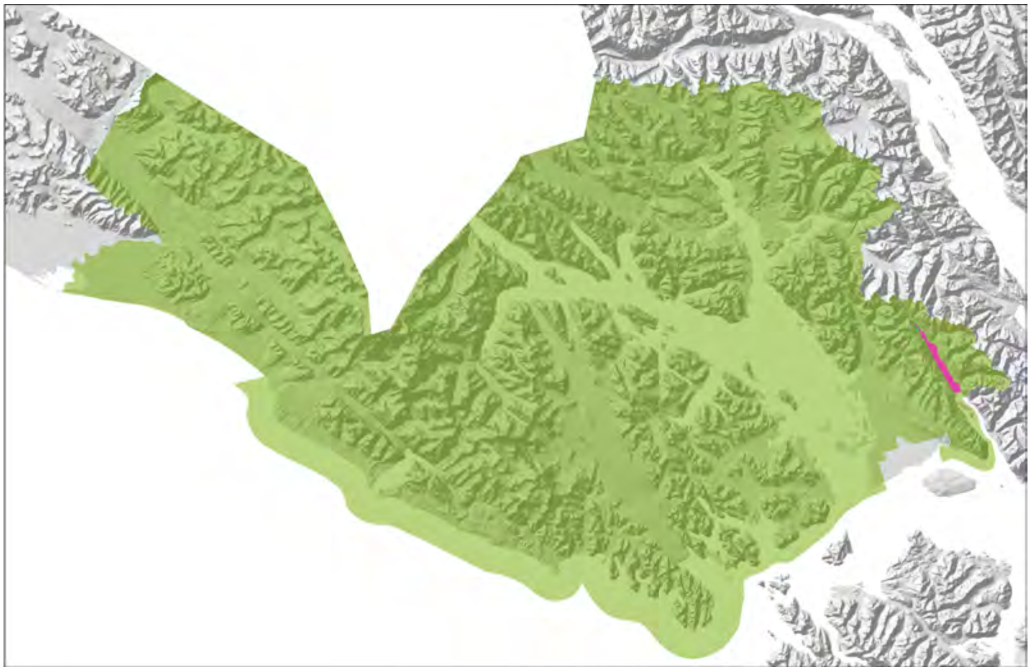

Figure A47: Location of areas (in bright pink) mapped as 20OPE—Tyeen-Shagcove-Puffin complex, 0 to 15 percent slopes, in Glacier Bay National Park and Preserve.

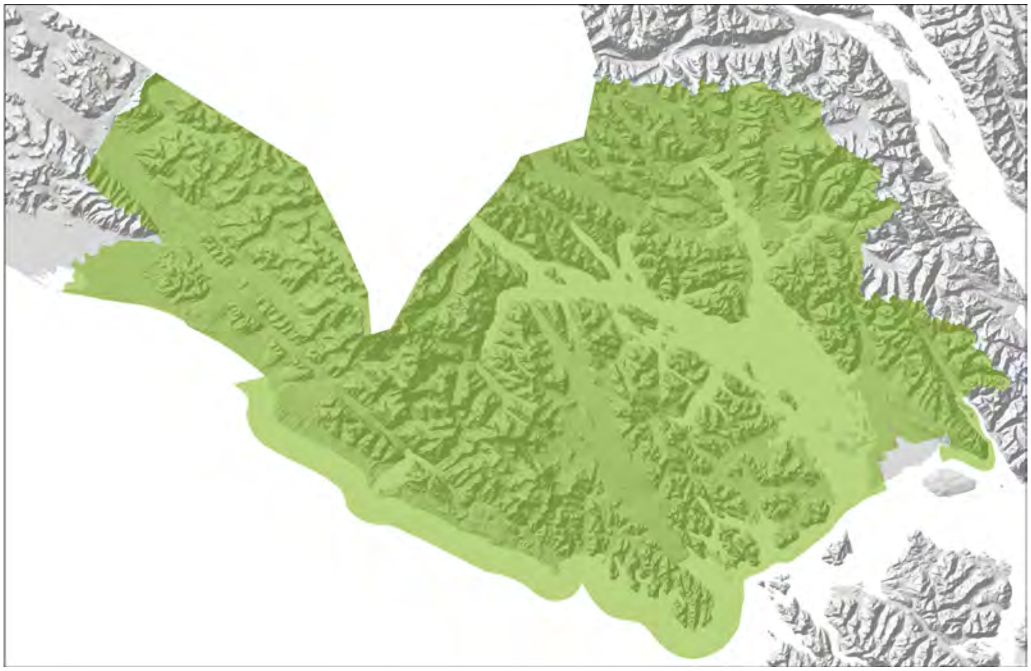

Figure A48: Location of areas (in bright pink) mapped as 20OV1—Perouse, frequently ponded-Perouse complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve. This map unit is of minor extent in the park. It occurs north and west of the town of Gustavus.

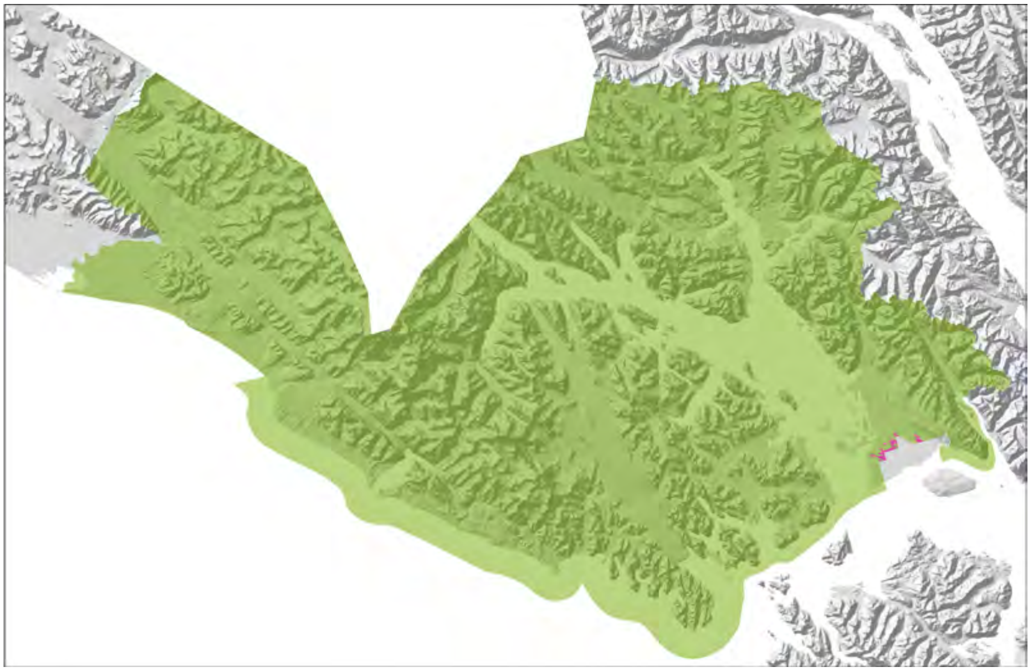

Figure A49: Location of areas (in bright pink) mapped as 20OW1—Perouse-Gustavus-Perouse, frequently ponded complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

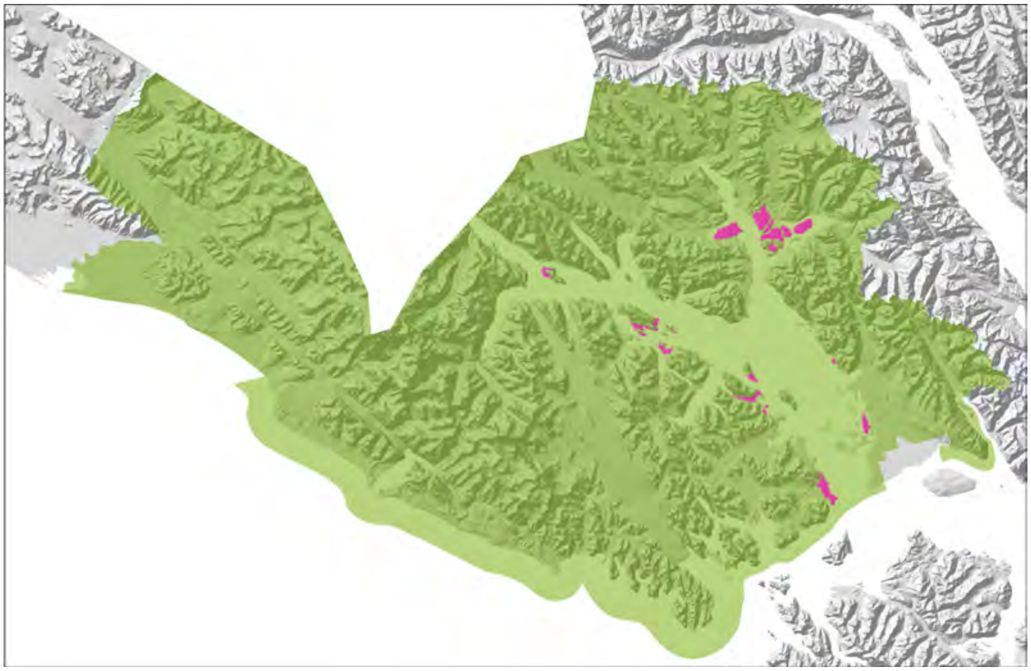

Figure A50: Location of areas (in bright pink) mapped as 20PL1—Tyeen-Cenotaph-Fossil complex, 0 to 30 percent slopes, in Glacier Bay National Park and Preserve.

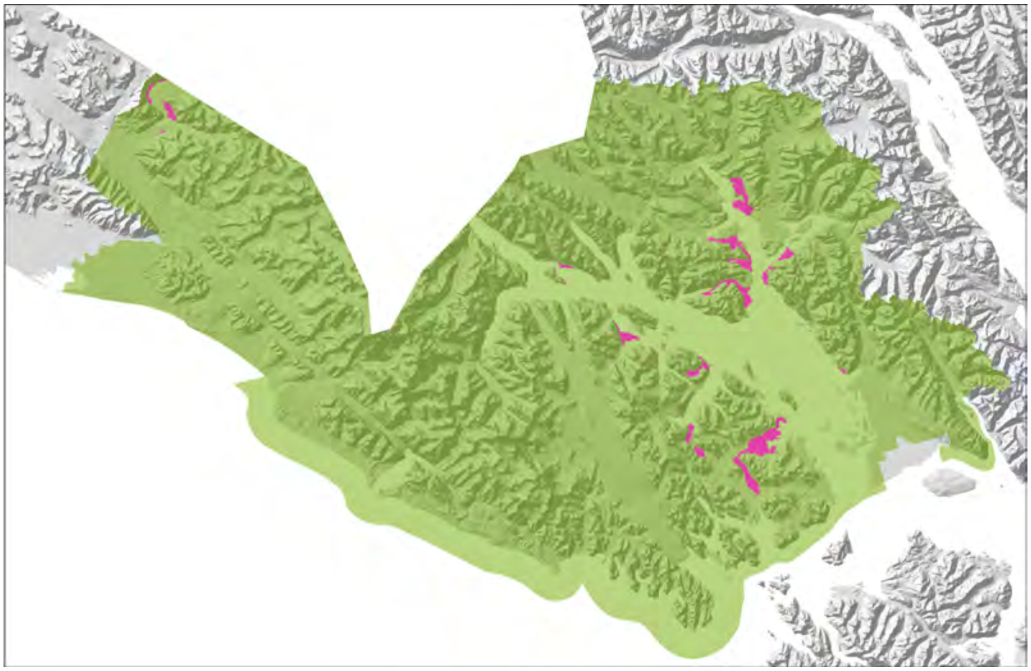

Figure A51: Location of areas (in bright pink) mapped as 20PL2—Tyeen-Fossil-Fingers complex, 0 to 30 percent slopes, in Glacier Bay National Park and Preserve.

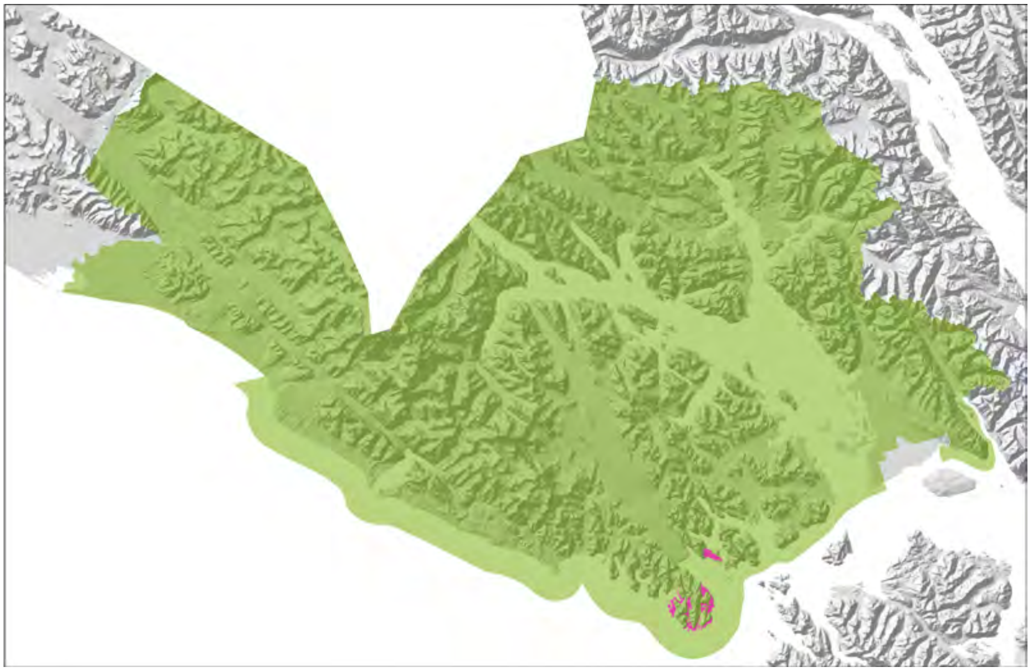

Figure A52: Location of areas (in bright pink) mapped as 20PL3—Kashoto-Annoksek-Ancon complex, 0 to 25 percent slopes, in Glacier Bay National Park and Preserve.

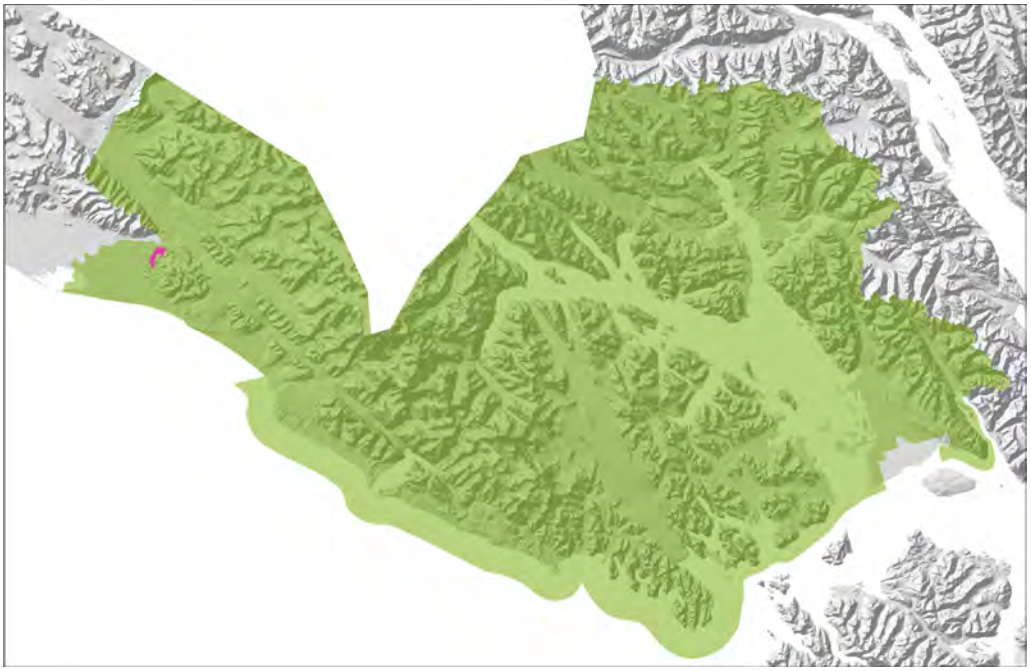

Figure A53: Location of areas (in bright pink) mapped as 20PL6—Tidalwave-Drybay-Puffin complex, 0 to 10 percent slopes, in Glacier Bay National Park and Preserve.

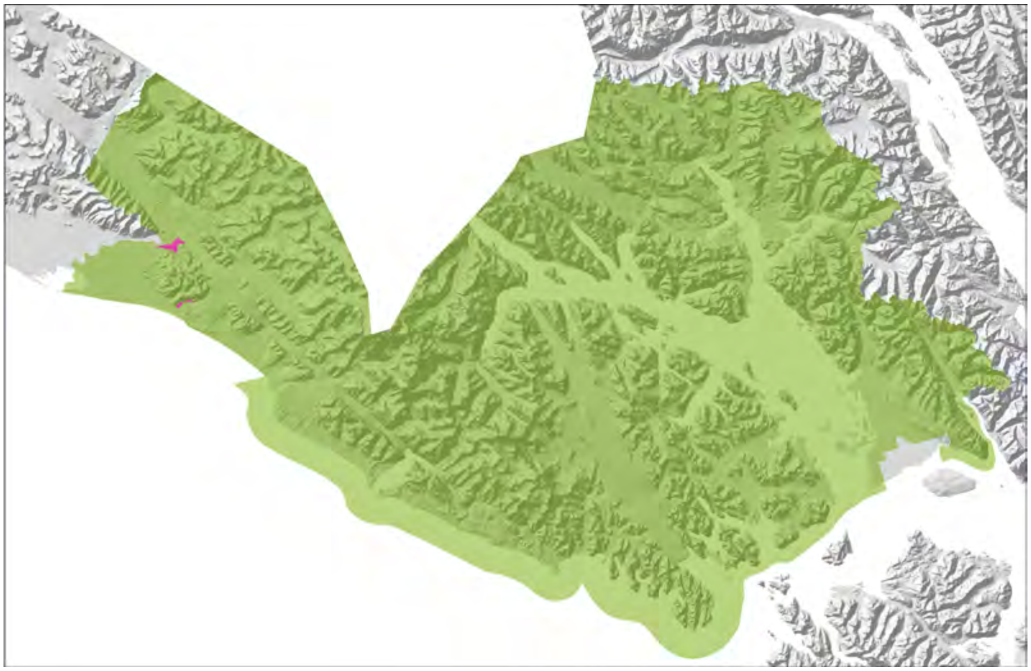

Figure A54: Location of areas (in bright pink) mapped as 20PLD—Typic Cryaquents-Typic Cryorthents association, flat lowlands, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

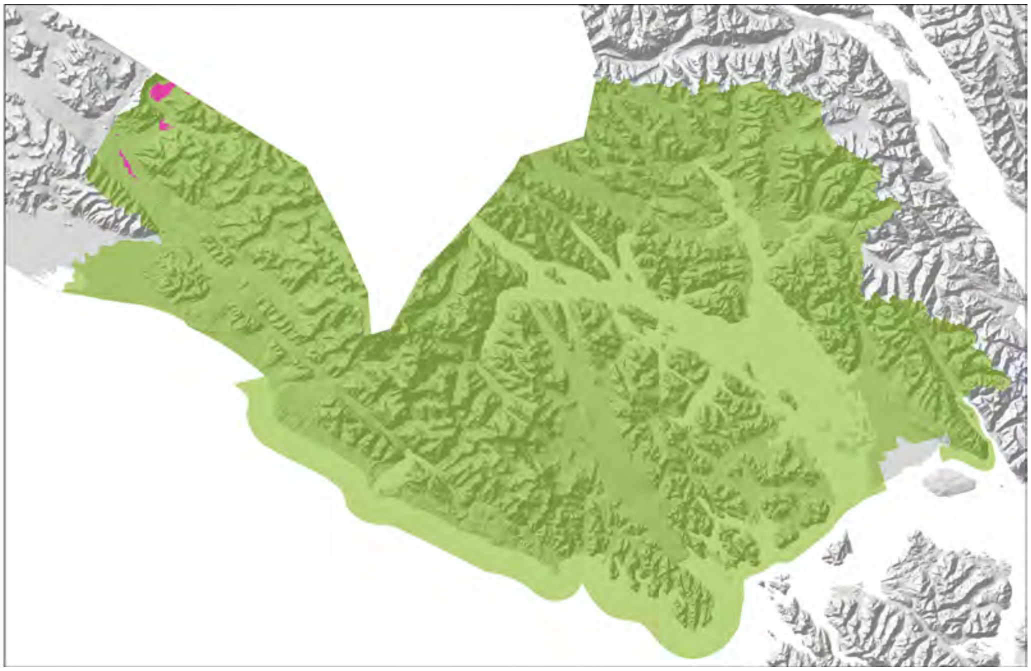

Figure A55: Location of areas (in bright pink) mapped as 20RW2—Riverwash-Oxyaquic Cryorthents complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

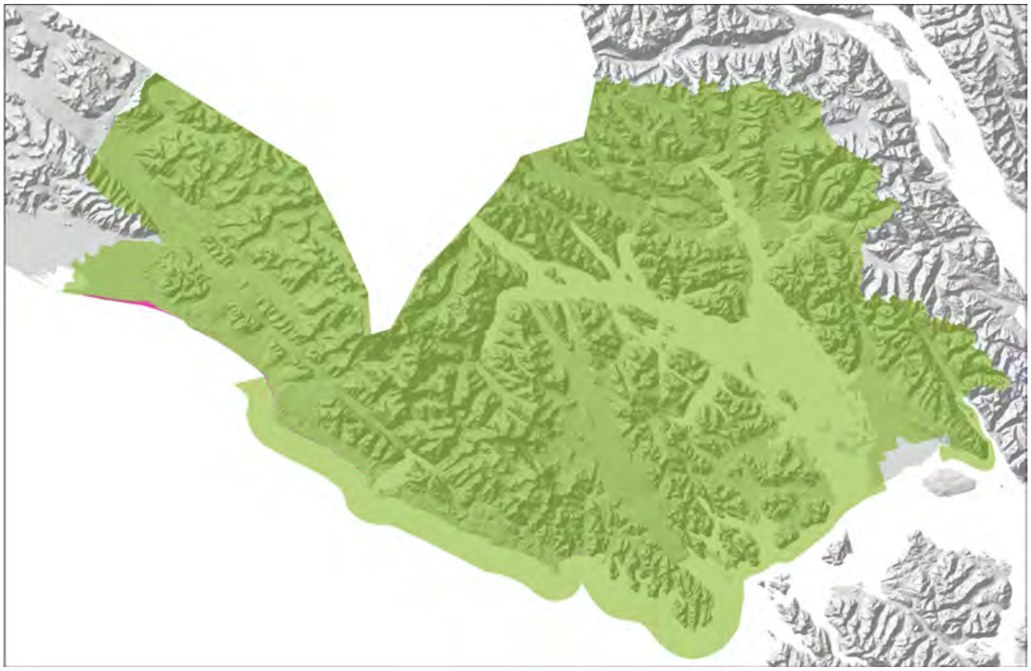

Figure A56: Location of areas (in bright pink) mapped as 20SC—Beaches-Typic Cryopsamments complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

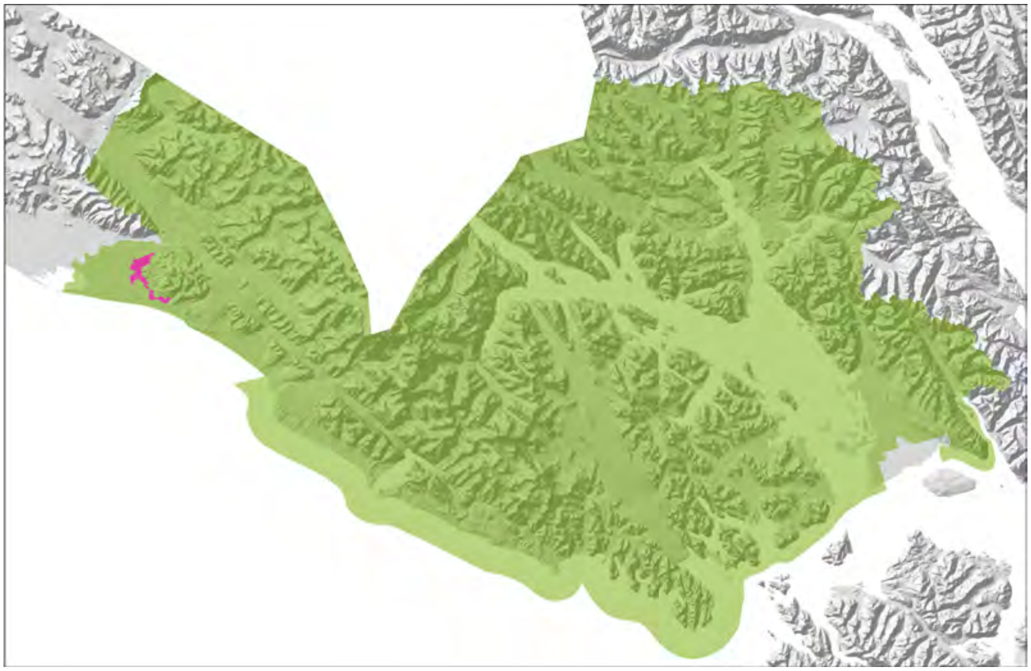

Figure A57: Location of areas (in bright pink) mapped as 20TE2—Tidalwave-Drybay complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

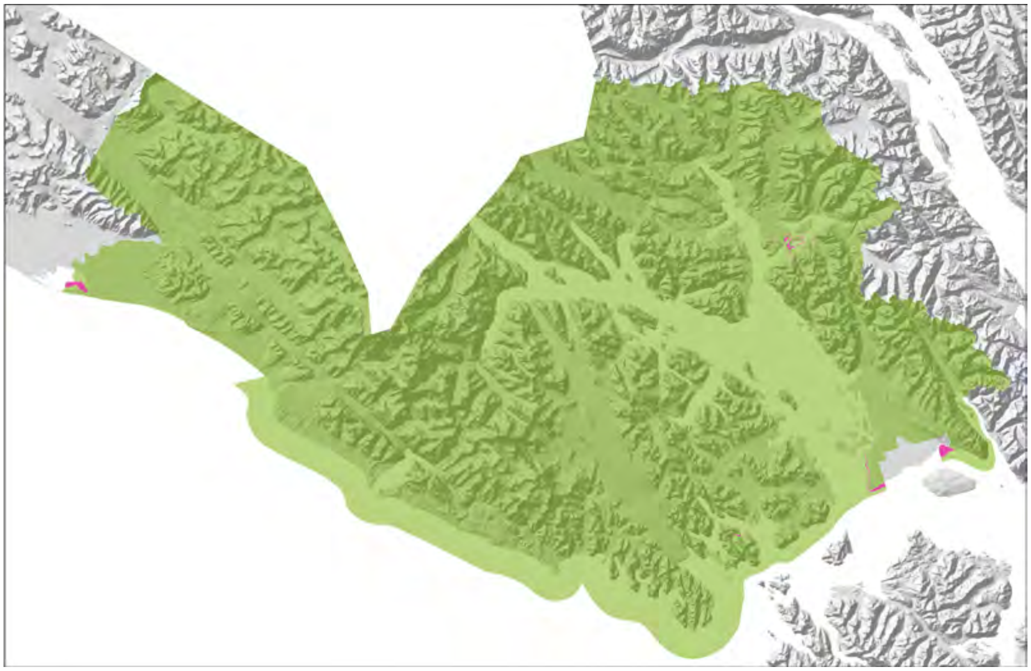

Figure A58: Location of areas (in bright pink) mapped as 20TF1—Water, saline-Astrolable-Murkbay complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

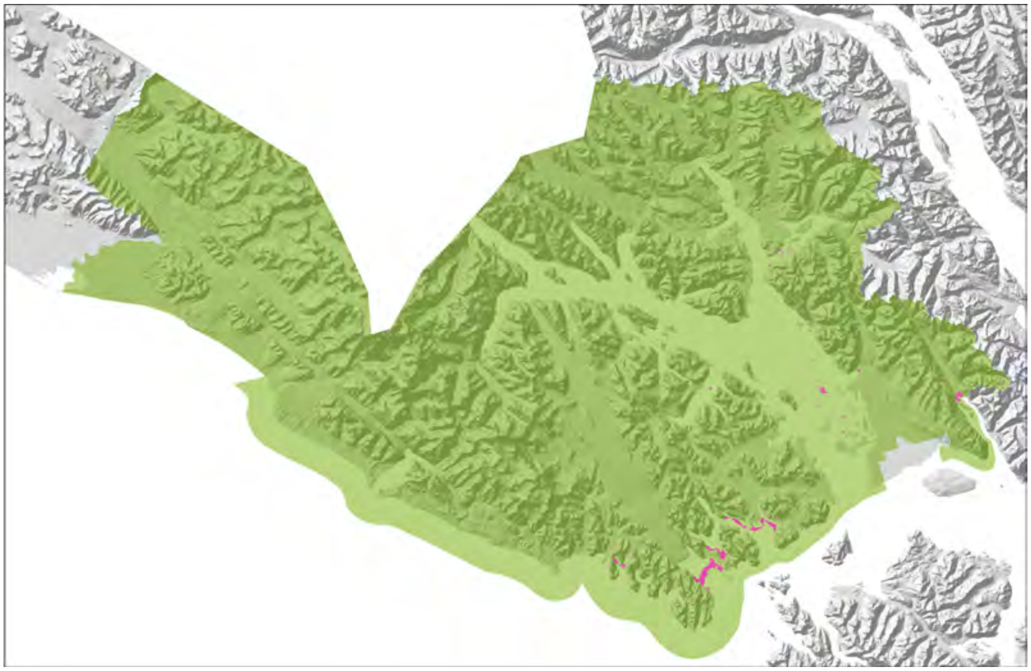

Figure A59: Location of areas (in bright pink) mapped as 20TF3—Water, saline-Astrolable-Beartrack complex, 0 to 3 percent slopes, in Glacier Bay National Park and Preserve.

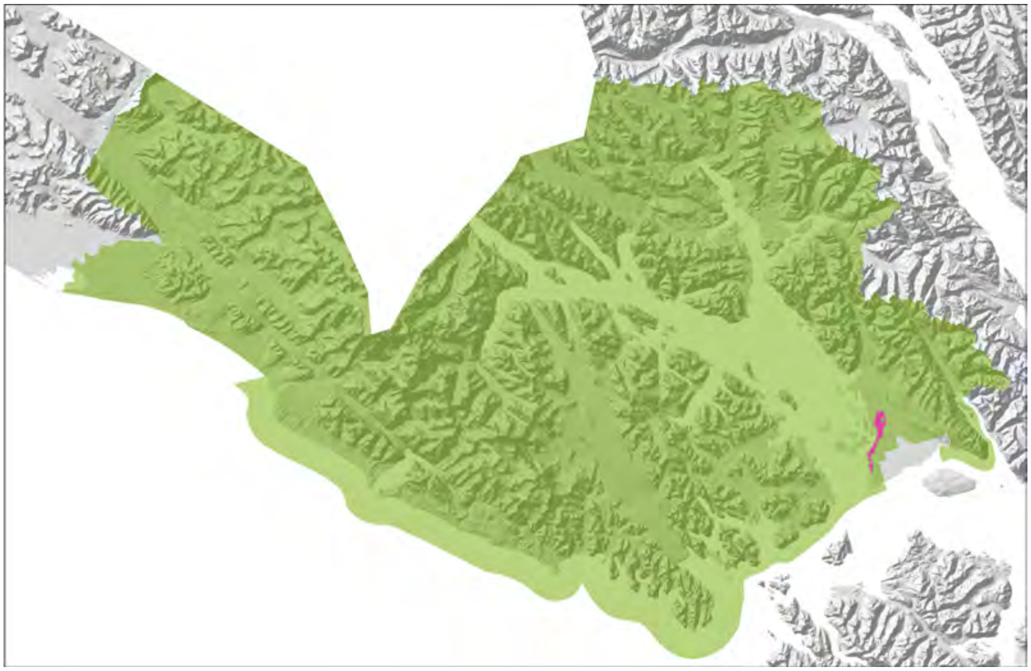

Figure A60: Location of areas (in bright pink) mapped as 20TH1—Ibach-Lamplugh-Bartlettcove complex, 2 to 35 percent slopes, in Glacier Bay National Park and Preserve.

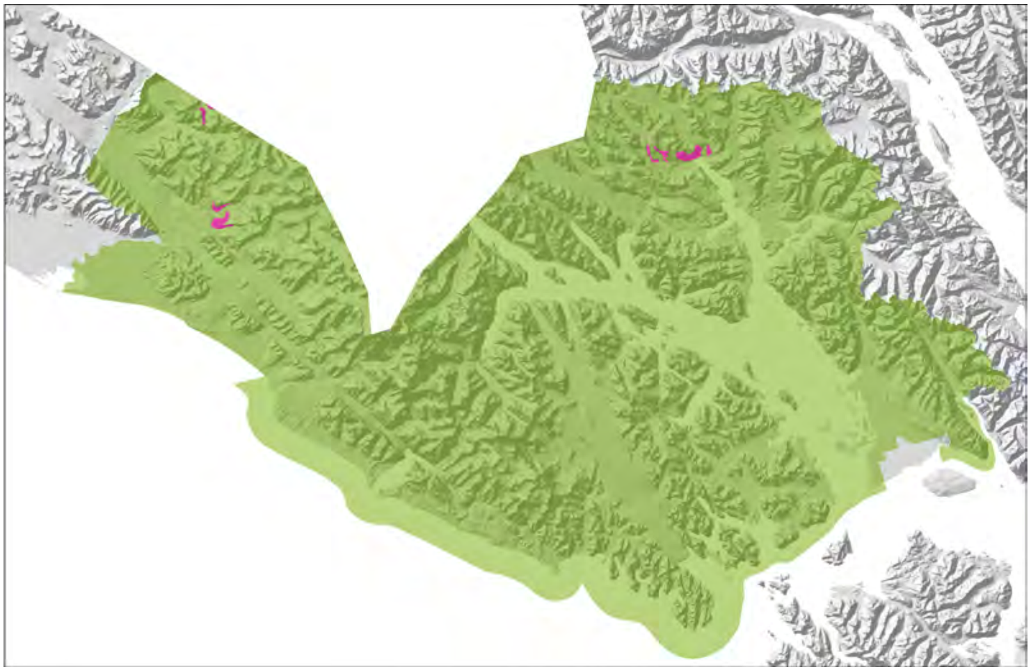

Figure A61: Location of areas (in bright pink) mapped as 20UM1—Rock outcrop-Bearisland complex, 60 to 100 percent slopes, in Glacier Bay National Park and Preserve.

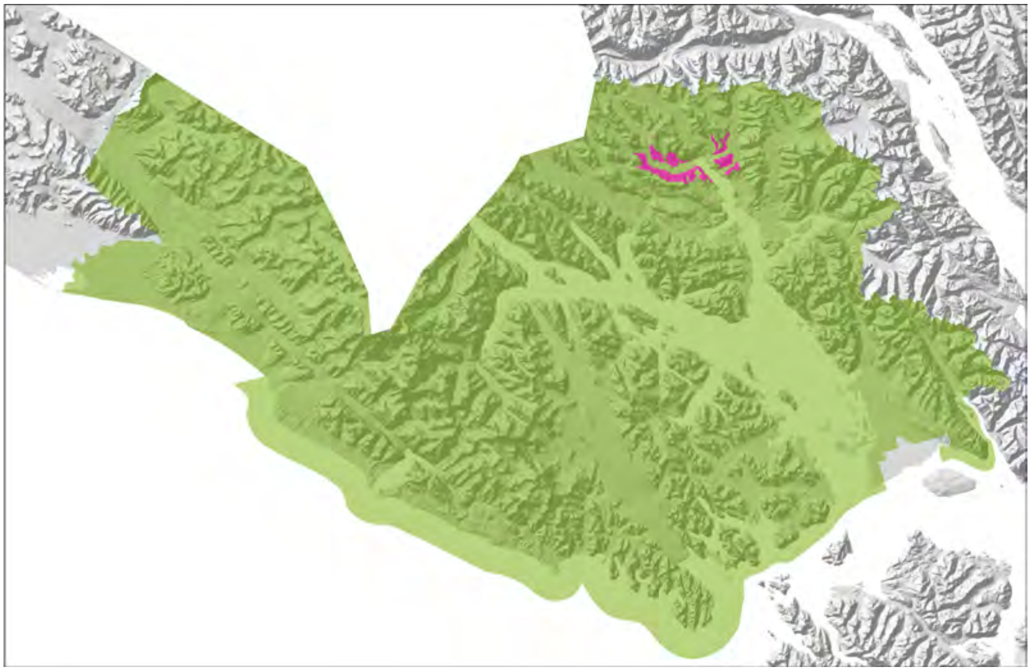

Figure A62: Location of areas (in bright pink) mapped as 20UM2—Rock outcrop-Bearisland complex, 10 to 60 percent slopes, in Glacier Bay National Park and Preserve.

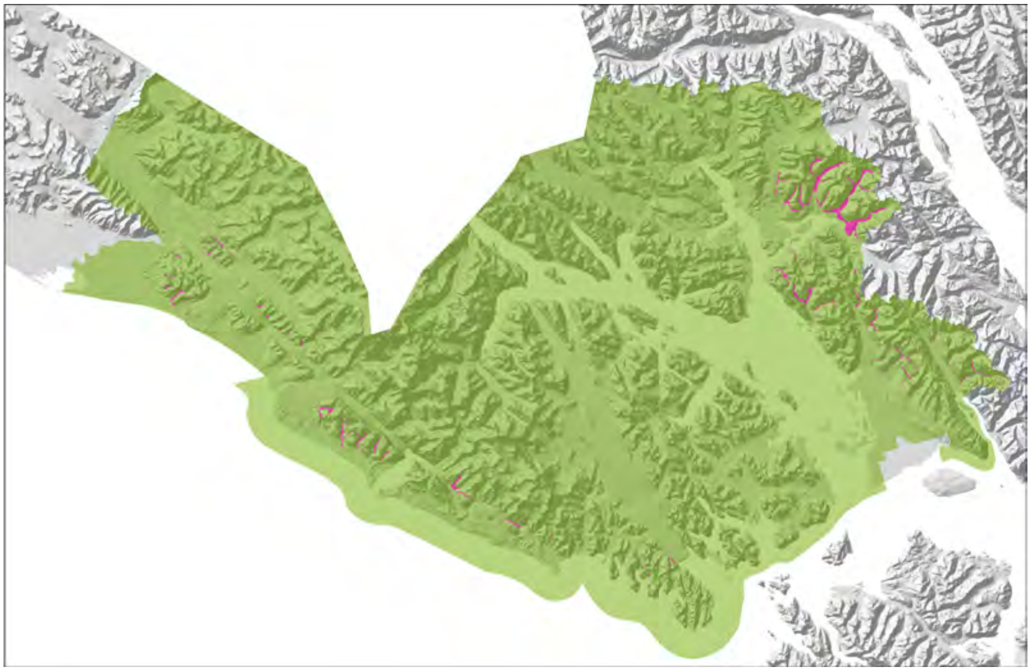

Figure A63: Location of areas (in bright pink) mapped as 20VBA—Typic Cryofluvents-Aquic Dystrocryepts association, flood plains, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

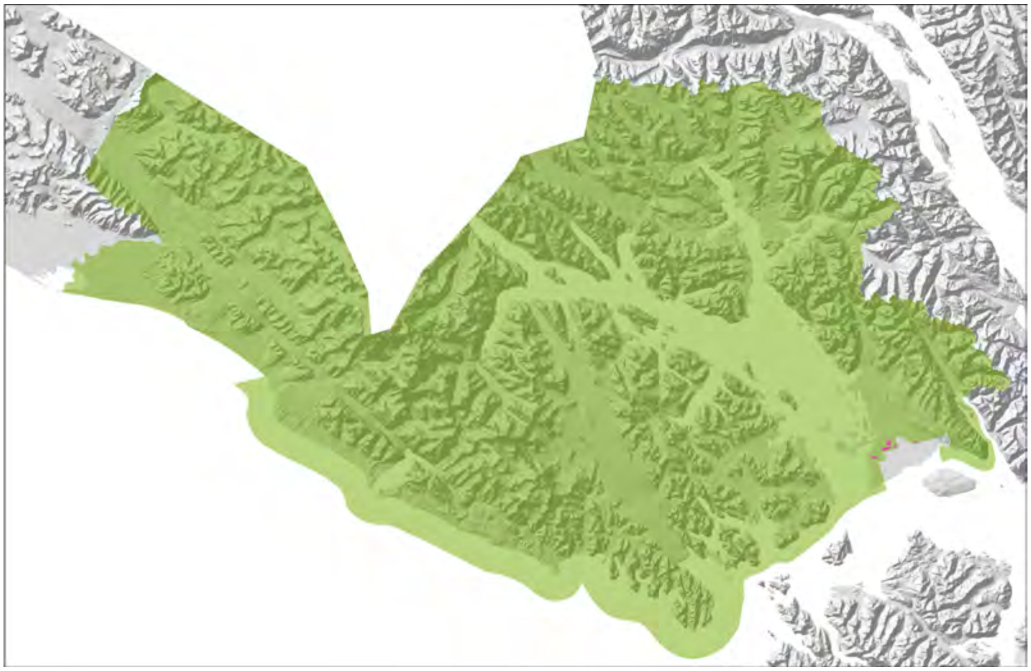

Figure A64: Location of areas (in bright pink) mapped as 20WD1—Perouse-Scidmore-Perouse, frequently ponded complex, 0 to 5 percent slopes, in Glacier Bay National Park and Preserve.

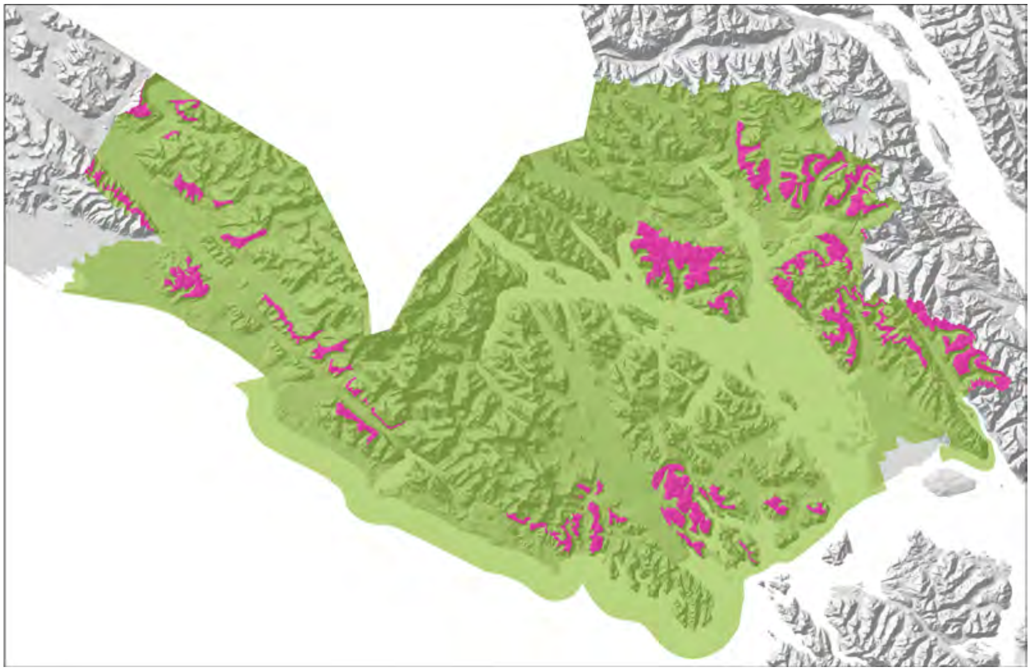

Figure A65: Location of areas (in bright pink) mapped as 22HIA—Rock oucrop and Lithic Cryorthents, in Glacier Bay National Park and Preserve.

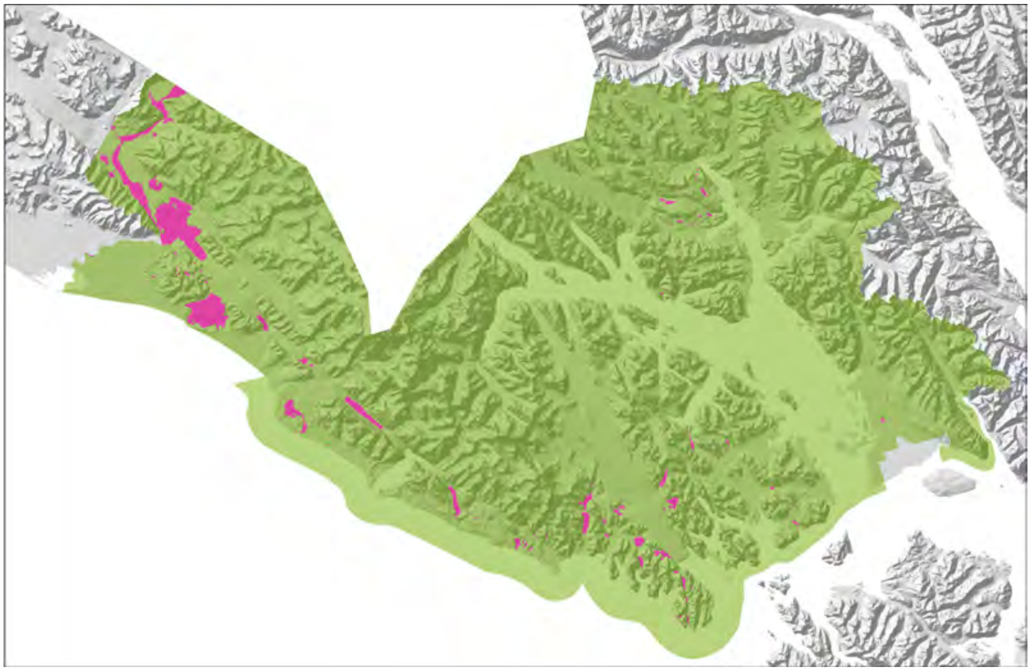

Figure A66: Location of areas (in bright pink) mapped as 22SM1—Woodlake-Flapjack complex, 5 to 40 percent slopes, in Glacier Bay National Park and Preserve.

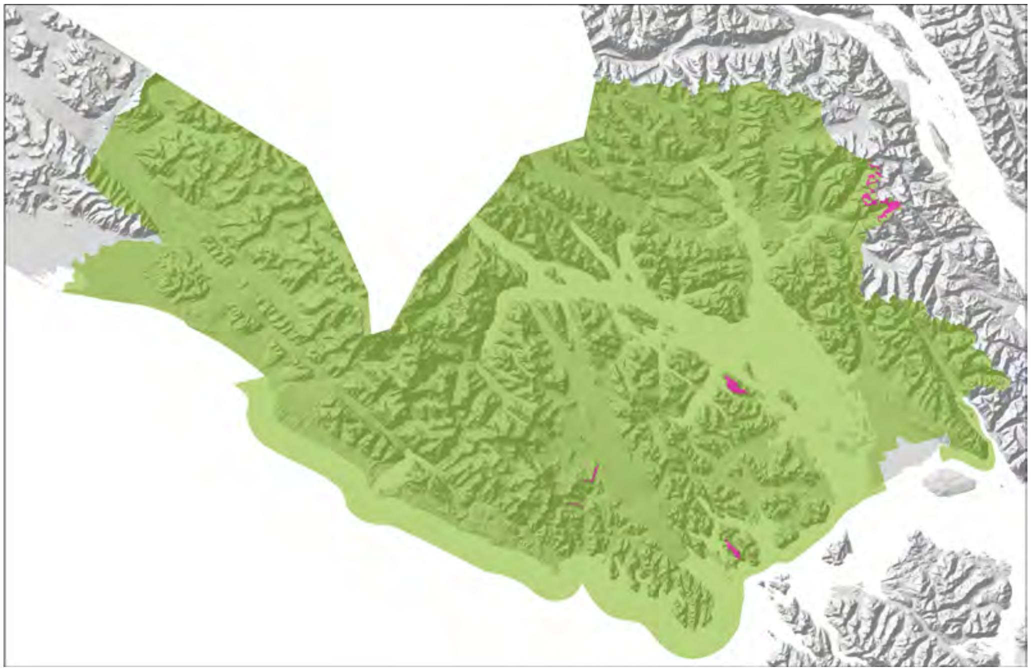

Figure A67: Location of areas (in bright pink) mapped as BR—Rock outrcrop, in Glacier Bay National Park and Preserve.

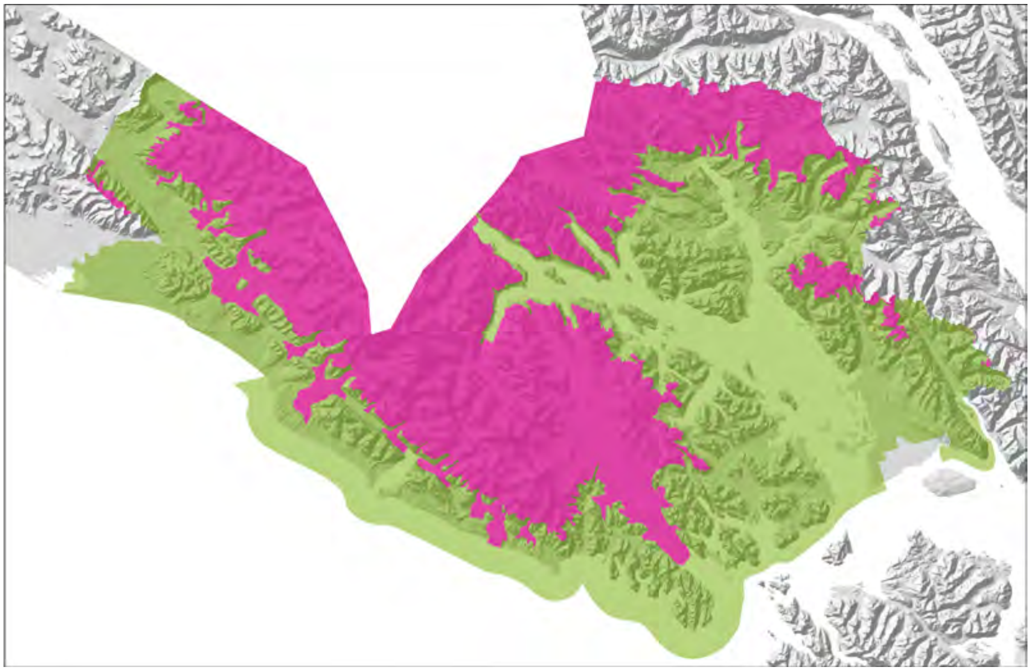

Figure A68: Location of areas (in bright pink) mapped as GL2—Glaciers, in Glacier Bay National Park and Preserve.

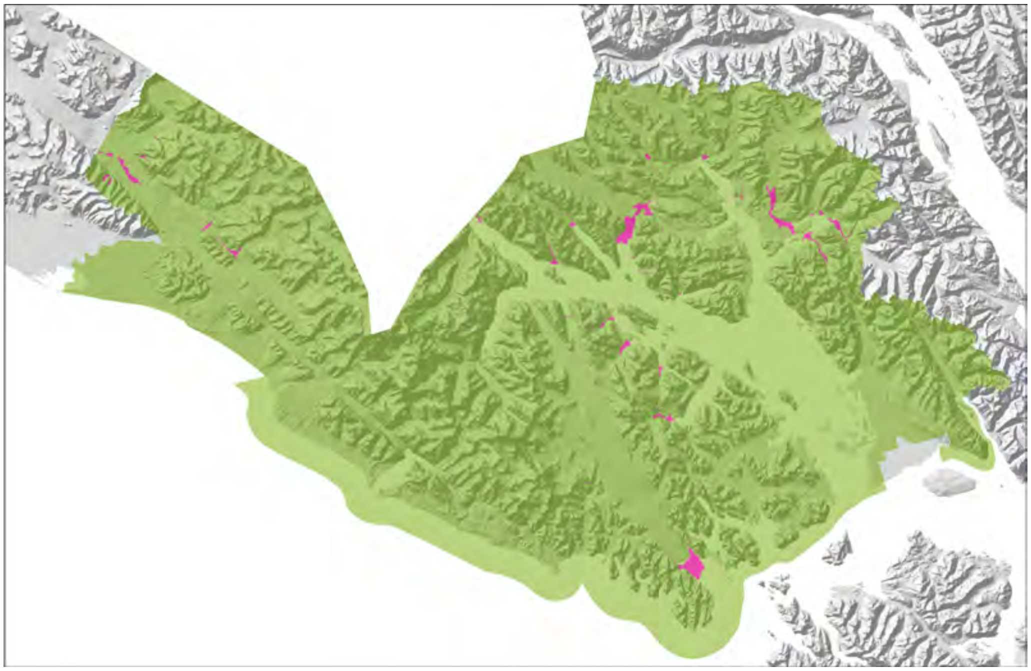

Figure A69: **Location of areas (in bright pink) mapped as RW—Riverwash, in Glacier Bay National Park and Preserve.**

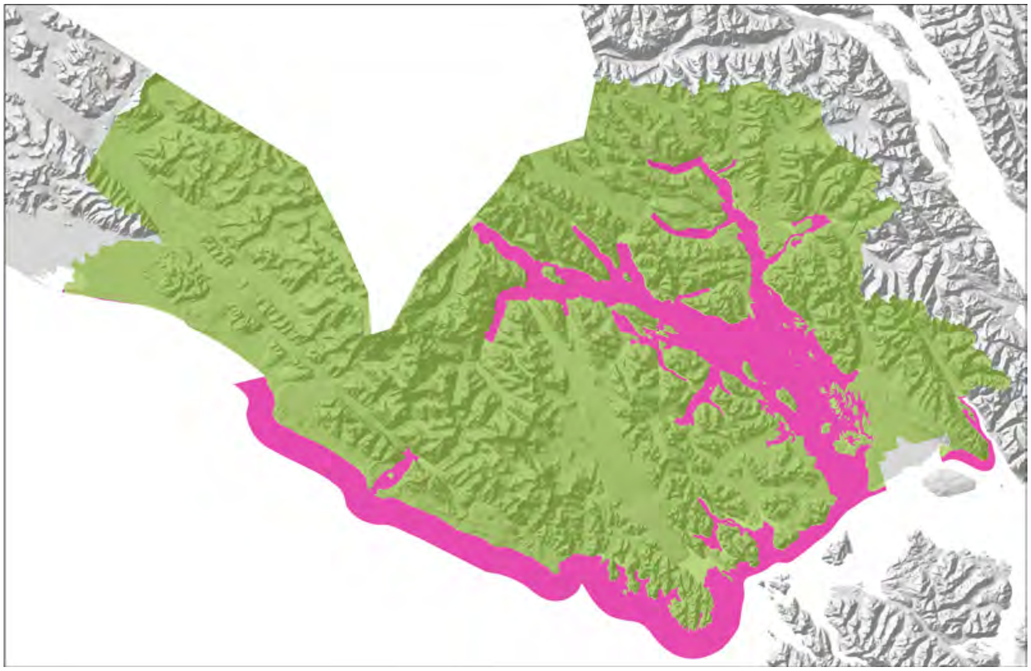

Figure A70: **Location of areas (in bright pink) mapped as SW—Water, saline, in Glacier Bay National Park and Preserve.**

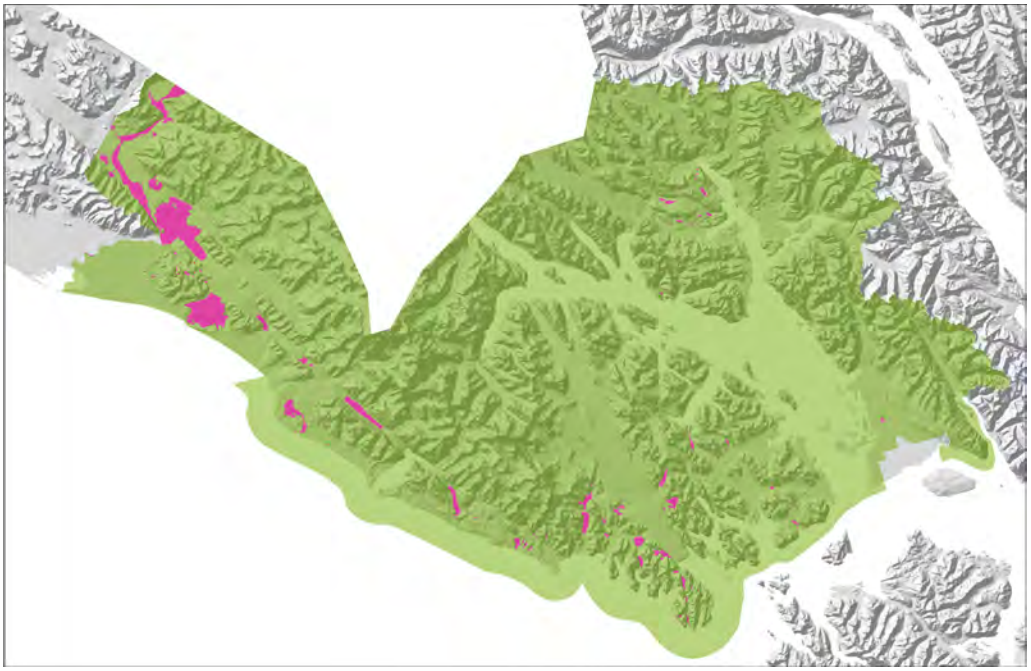

Figure A71: Location of areas (in bright pink) mapped as W—Water, in Glacier Bay National Park and Preserve.

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